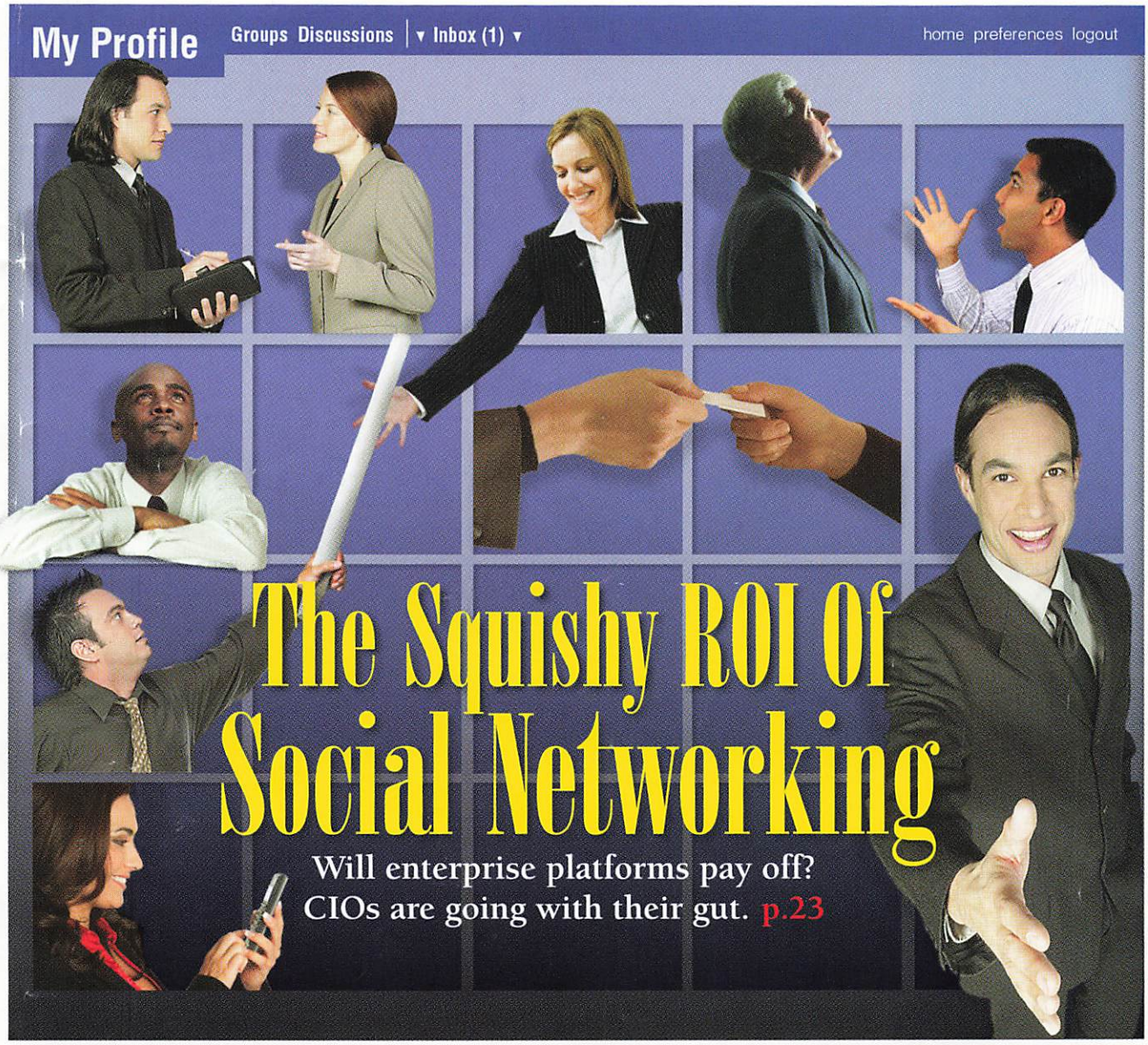
United Business Media

What IBM-Sun would mean 15, 46 | Powering up the smart grid 18 | Cisco's unified world 19 | Ranking the worst IT maladies 37 | Health care, meet the 21st century 48

InformationWeek

THE BUSINESS VALUE OF TECHNOLOGY

MARCH 23, 2009



The Squishy ROI Of Social Networking

Will enterprise platforms pay off? CIOs are going with their gut. p.23

informationweek.com

[PLUS]

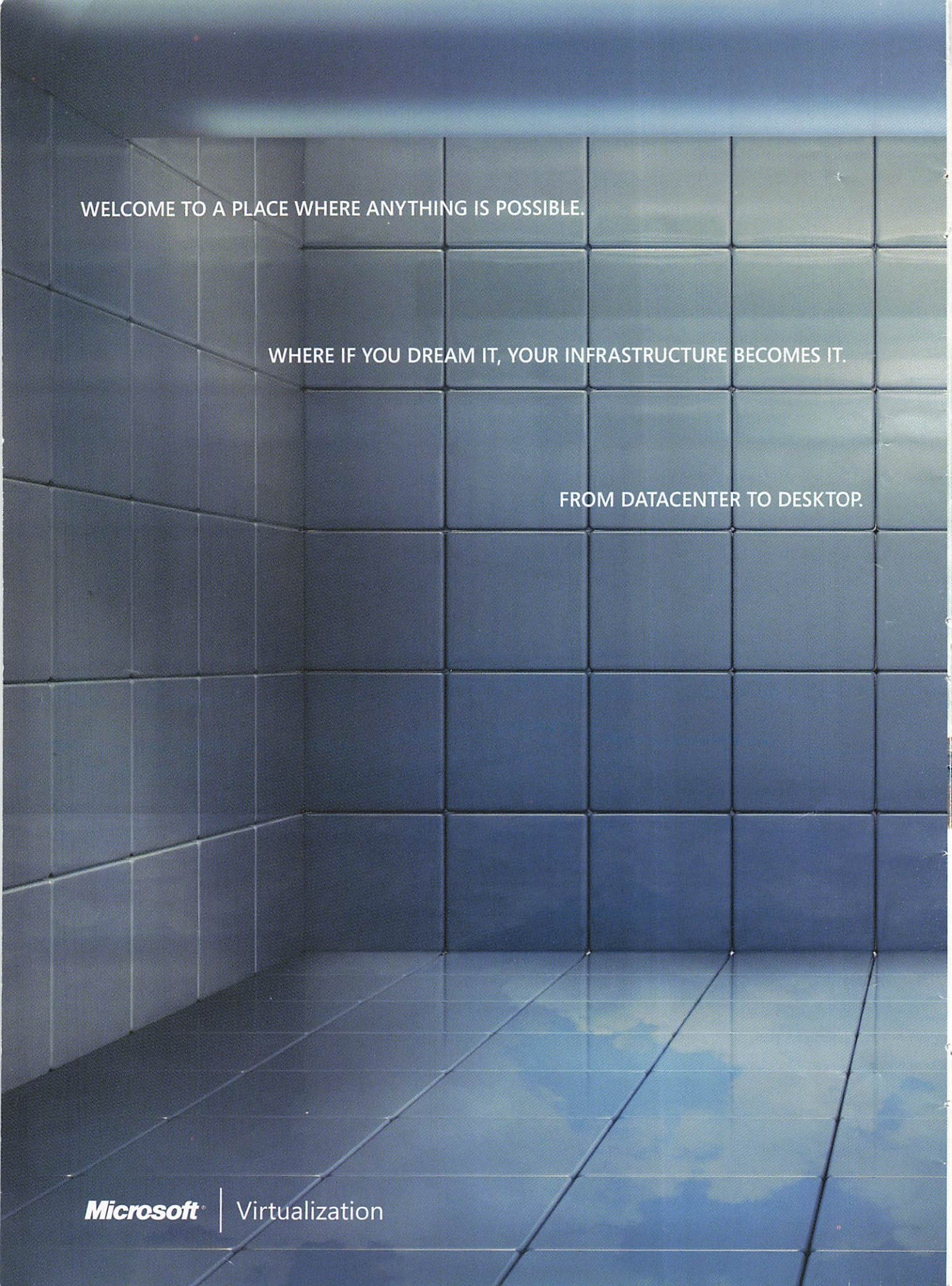
CLOUD COMPUTING

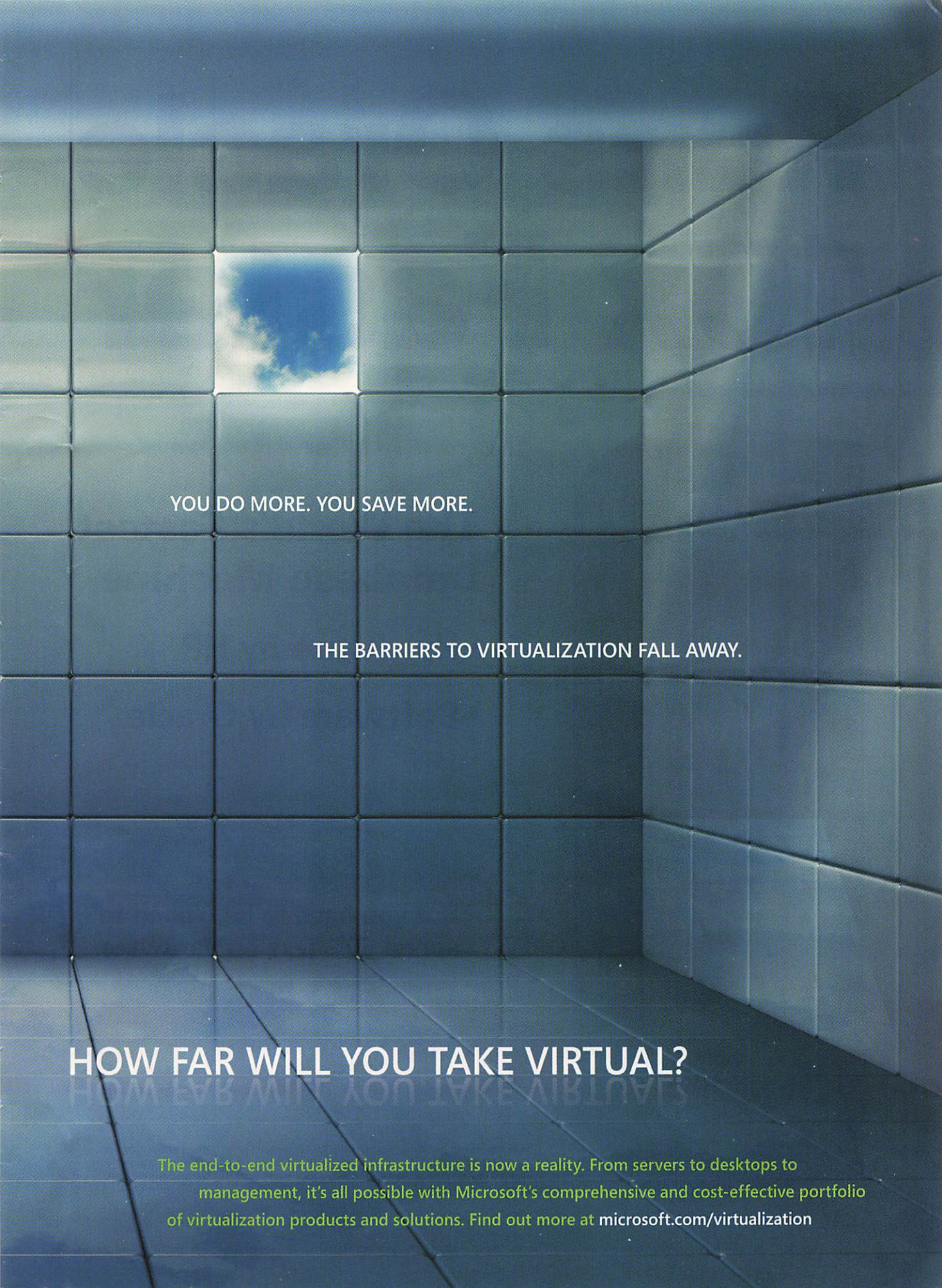
Time to set higher expectations

p.40

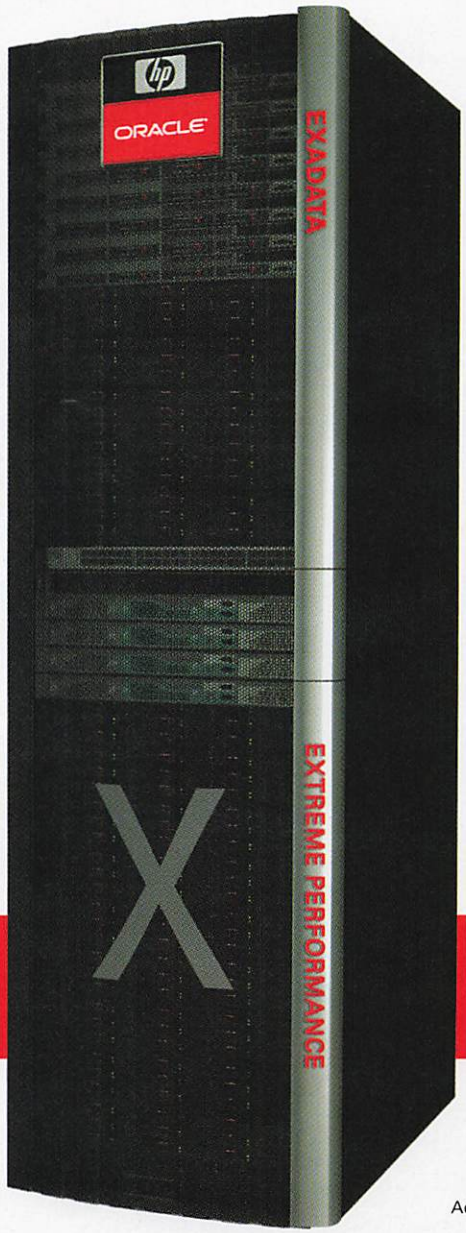
A United Business Media Publication®

CAN $5.95, US $4.95


WELCOME TO A PLACE WHERE ANYTHING IS POSSIBLE.
WHERE IF YOU DREAM IT, YOUR INFRASTRUCTURE BECOMES IT.
FROM DATACENTER TO DESKTOP.
Microsoft | Virtualization


YOU DO MORE. YOU SAVE MORE.
THE BARRIERS TO VIRTUALIZATION FALL AWAY.
HOW FAR WILL YOU TAKE VIRTUAL?
The end-to-end virtualized infrastructure is now a reality. From servers to desktops to management, it's all possible with Microsoft's comprehensive and cost-effective portfolio of virtualization products and solutions. Find out more at microsoft.com/virtualization

Runs Oracle 10x Faster*



The World's Fastest Database Machine

- Hardware by HP
- Software by Oracle

*But you have to be willing to spend 50% less on hardware.

ORACLE®

10x faster based on comparing Oracle data warehouses on customer systems vs. HP Oracle Database Machines. Potential savings based on cost/terabyte comparison with selected competitor systems; Oracle Database and options licenses not included. Actual results and savings may vary.

Copyright © 2009, Oracle. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

InformationWeek

CONTENTS

THE BUSINESS VALUE OF TECHNOLOGY

March 23, 2009 Issue 1,224

[QUICKTAKES]

15 **Merger In The Works**
From Java to the cloud, what IBM-Sun would change

16 **Tech Turnaround**
Computer science studies rebound

Long-Distance Research
Satellite tech aids in testing effectiveness of malaria vaccine

Aiming For Adobe
Microsoft's Silverlight breaks free from the browser

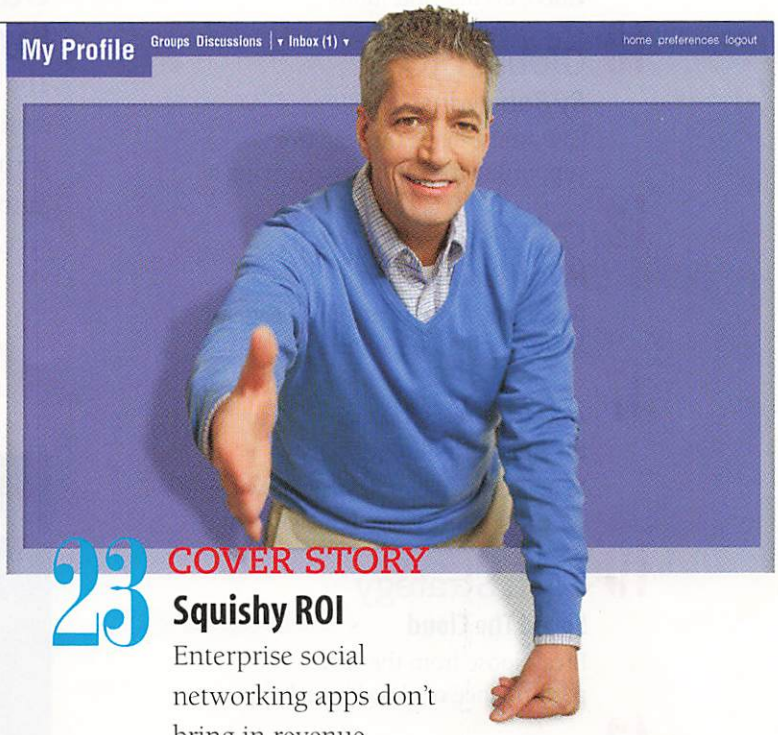
17 **Cloud Convert**
Rackspace transforms itself into a cloud computing vendor

All Business
Vendors bring enterprise apps to the iPhone

18 **Green Growth**
Federal money accelerates smart grid plans

19 **Sharp Idea**
Cisco aims to boost virtualization with blade server line

20 **Standard Practice**
Standards could be the weak link in Cisco's unified computing initiative



23 COVER STORY
Squishy ROI
Enterprise social networking apps don't bring in revenue, but they can still provide value for a company. Find out how.

19

15

[CONTENTS]

6 Links
Research And Connect
InformationWeek's Analytics Reports, video, events, and more

10 Global CIO
By Bob Evans
CIOs must make the leap from supporting the business to driving it

12 CIO Profiles
In Your Business
Be seen as more than a tech leader, Minneapolis' CIO advises

37 Analytics Brief
Business Intelligence
Many companies still struggle with basics of information management

40 Tech Strategy
Speed The Cloud
Break loose from the slow performance of cloud-based apps

43 **Beyond The Big 3**
Virtualization Rolling Review tests Virtual Iron and Parallels Server

46 Practical Analysis
By Art Wittmann
The software transition IBM hopes to capitalize on is well under way

48 Down To Business
By Rob Preston
Health care laggards need government push

32
Outsourcing
Pay For Performance
The recession is changing strategic outsourcing partnerships and putting the focus back on cost cutting

12

Contacts & Feedback

8 Feedback
9 Editorial Contacts
45 Advertiser and Editorial Indexes
45 Sales Contacts

upcoming events: Web 2.0 Expo

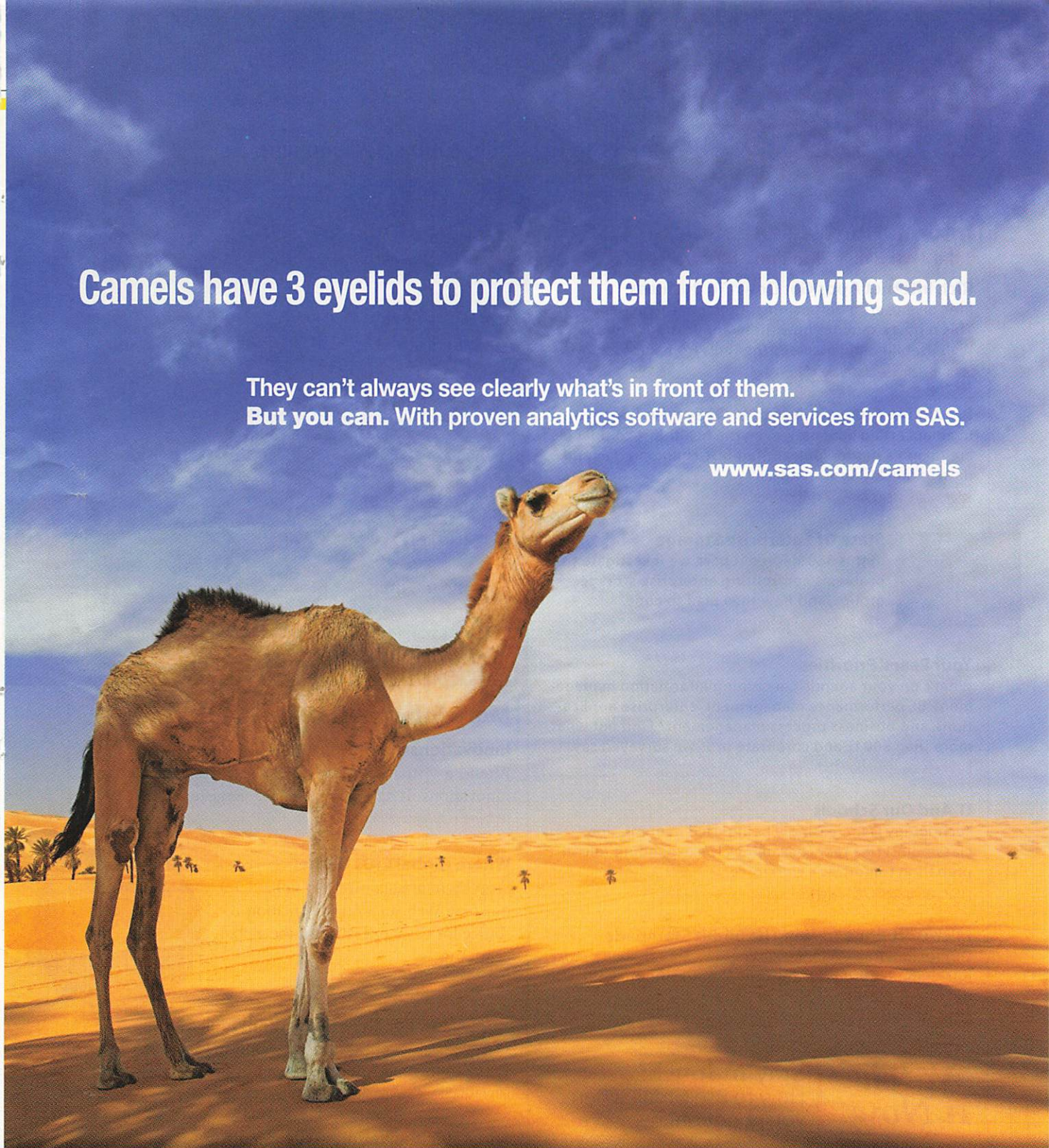
New Opportunities
Learn how to help your company take advantage of Web 2.0 technologies. Find out more: web2expo.com/webexsf2009

March 31 to April 3
Moscone West, San Francisco

Camels have 3 eyelids to protect them from blowing sand.

They can't always see clearly what's in front of them.
But you can. With proven analytics software and services from SAS.

www.sas.com/camels



SAS SOFTWARE HELPS COMPANIES ACROSS EVERY INDUSTRY DISCOVER INNOVATIVE WAYS TO INCREASE PROFITS, MANAGE RISK AND OPTIMIZE PERFORMANCE.

SAS® Analytics

Visit www.sas.com/camels for ***Competing on Analytics series summary***

- Large-scale forecasting
- Data and text mining
- Model management and deployment
- Data visualization
- Optimization
- Quality improvement
- Statistical analysis

sas | THE POWER TO KNOW.

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. © 2008 SAS Institute Inc. All rights reserved. 514435US.1008

Links

Resources to Research, Connect, Comment

InformationWeek Analytics

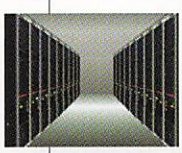
Take a deep dive with these reports

Rich Internet Apps Get Down To Business

RIAs give users a better, more interactive experience. This report examines how these applications improve Web usability and assesses the tools from key vendors.
informationweek.com/alert/ria

Predictive Analysis: A Matter Of Survival

In an uncertain economy, even the healthiest companies are taking a harder look at their fast-changing demand data to quickly spot trends.
informationweek.com/alert/demanddata



State Of Enterprise Storage

In this 360-degree report, we investigate the problems confronting enterprise storage groups, and how they plan to cope.
stateofstorage.informationweek.com

Your Peers' Priorities

What's on your agenda concerning information management, BI, performance management, enterprise applications, and business process management? Find out what more than 300 IT and corporate pros we surveyed say.
business-optimization.techweb.com

IT And Our Schools

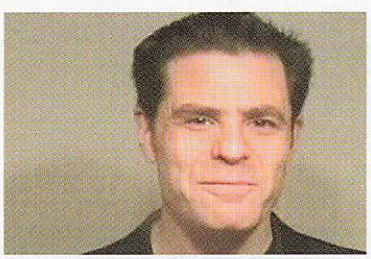
Technology is increasingly being used in our nation's classrooms. This report examines IT's expanding role in preparing tomorrow's workforce.
informationweek.com/alert/education

Microsoft Aims To Join The 64-Bit Stampede

Our Rolling Review looks at Windows Server 2008's most intriguing features, one by one. Should you run with it, or get out of the way?
informationweek.com/1208/windows

Watch It Now

Stay In Touch: How to use Gmail when you're not online



David Berlind demonstrates how to enable any Google Gmail account for use, even without an Internet connection.
informationweek.com/video/gmail

VIRTUAL PAYOFF

The love affair with virtualization shows no signs of cooling—83% of the 348 business technology professionals we surveyed are using or planning to deploy virtualization technology. What are the top goals organizations aim to achieve by "going virtual"?

1. **Reduce cost**
2. **Save space**
3. **Gain flexibility**

Find out more in our report, free for a limited time:
informationweek.com/tw/virtualization

More InformationWeek

Innovations In Storage

Attend a virtual event on the latest in practical storage innovations. It happens March 25. Register at:
techweb.com/innovations-virtual

Where Global CIOs Gather

Stop by *InformationWeek*'s Global CIO, our new Web site and information resource for CIOs operating in the global economy.
informationweek.com/global-cio

Apply Now For The InformationWeek 500

Preregister for our annual list honoring the most innovative users of technology.
informationweek.com/500/prereg

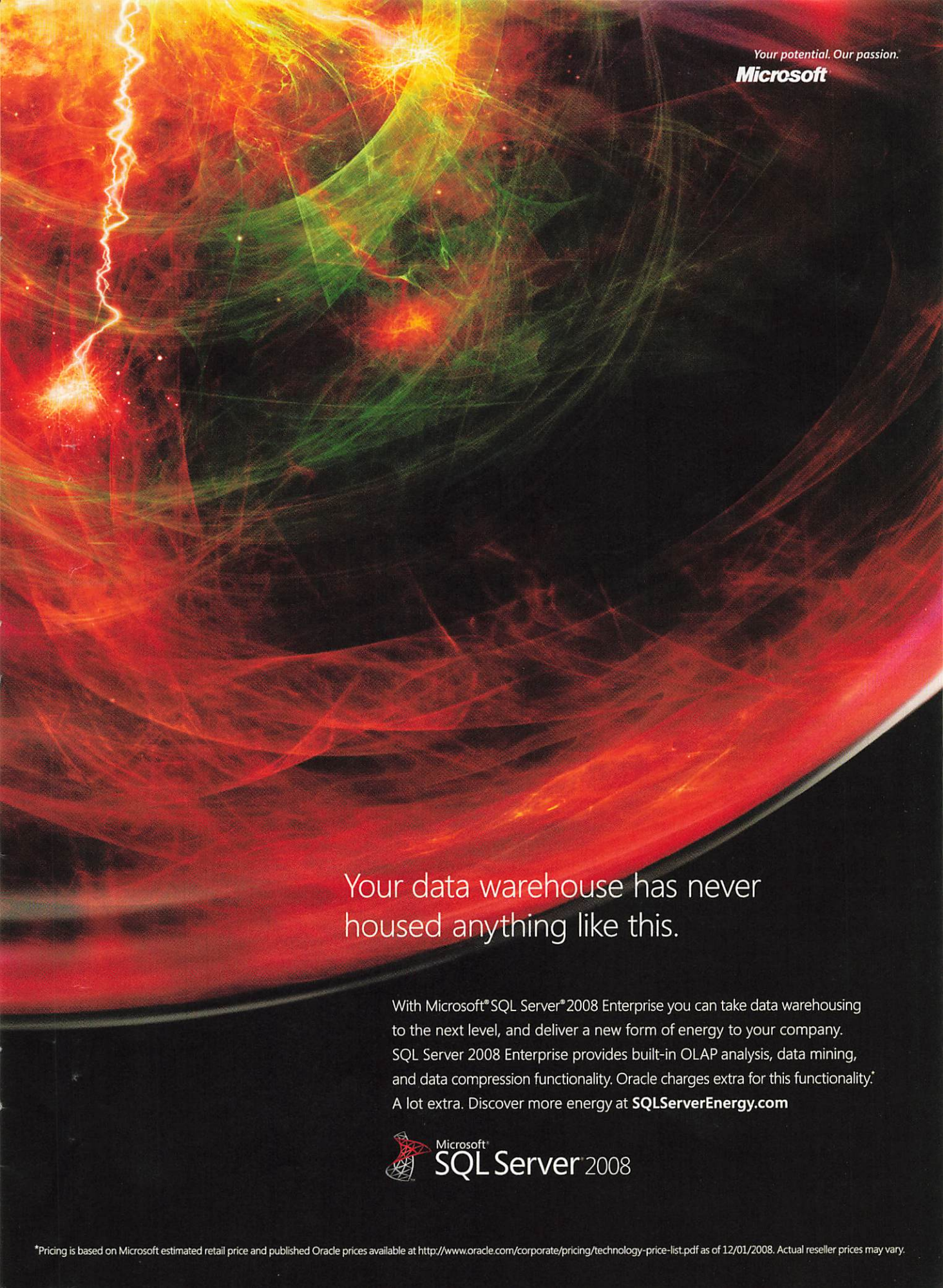
Server Virtualization's True Price

Find out how to avoid the hidden costs of server virtualization in this Webcast on March 31. Register at:
informationweek.com/webcast/cost

Get Published

Upload your white paper to the TechWeb Digital Library, and find tons of reports to help with your tech research.
informationweek.com/digital_library

JupiterImages


Your potential. Our passion.
Microsoft
Your data warehouse has never housed anything like this.
With Microsoft® SQL Server® 2008 Enterprise you can take data warehousing to the next level, and deliver a new form of energy to your company. SQL Server 2008 Enterprise provides built-in OLAP analysis, data mining, and data compression functionality. Oracle charges extra for this functionality.* A lot extra. Discover more energy at SQLServerEnergy.com
Microsoft SQL Server 2008
*Pricing is based on Microsoft estimated retail price and published Oracle prices available at http://www.oracle.com/corporate/pricing/technology-price-list.pdf as of 12/01/2008. Actual reseller prices may vary.

feedback

Write to us at iweekletters@techweb.com

A Matter Of Survival

Predicting demand is particularly hard in a recession, so manufacturers and retailers are pushing for the next breakthroughs in demand forecasting. —*Doug Henschen*

informationweek.com/1222/demand.htm

Nice work on putting out a timely article on the utility of business intelligence in today's declining economy. I'm a former CIO and COO for a food manufacturer, so lots of your examples rang true for me. Today I find myself managing the vendor services solution for the country's third-largest medical staffing firm. We use technology and a whole lot of services to help hospitals manage their contingent staffing.

The article makes a specific reference to hospitals using enhanced patient flow data to better plan staffing. If you look back to the early '90s when SAP, Oracle, PeopleSoft, Baan, JD Edwards, and other ERP solutions were being marketed and installed at manufacturers, hospitals are at that same point. Hopefully, they'll learn from the mistakes of the past (it's one thing to shut down a candy-bar plant; it's another to shut down an ER).

I call on many hospitals coast to coast. Most are scrambling to move their tech forward. The Obama-inspired mandates on hospitals to adopt specific technology or lose funding is accelerating hospital interest in integrated tech. —**Tim Jackson, VP, OneSource Product Management, Medical Staffing Network**

CIO As Chief Cost Cutter: It's Not Enough

Your primary objective as CIO is to help drive greater business value and customer value, and no amount of blunt-force cost cutting will deliver on both of those goals. —*Bob Evans*

informationweek.com/1222/evans.htm

During boom periods, we're all running at 100 mph when losses due to inefficiencies aren't as important as getting new technology out the door. Now is a great time for the CIO to get his or her ducks in a row. What if we focused on truly defining best practices and improved process steps, standardizing and centralizing, and incorporating technology to execute and govern the new processes across the enterprise. Imagine the power the new way of doing business will have when the economy turns around. Imagine running at 100 mph without tripping. —**PaulDandurand**

Isn't one reason that IT is often "reacting" to the business because business priorities can change more quickly than can IT development cycles? Thus, IT is often "out of phase" with the business.

Can't IT create service lines within the organization, so that some subset of resources is always working on cost-cutting initiatives and some on innovation, etc.? This would enable IT to remain in phase, eliminate context switching, and enable the CIO to answer the tough questions posed in the article. —**Mark Bills**

Help Wanted: CIOs Need Not Apply

The recession is turning out to be a career-booster for some IT management folks, but a dream-buster for a lot of CIOs looking for new jobs. —*Marianne Kolbasuk McGee*

informationweek.com/1222/help.htm

Ever since the CIO idea emerged, we've seen a wild proliferation of other Chief of This or Chief of That titles. Perhaps it's time to delete all the Chiefs and move on to a new productivity-driven architecture for management of IT as an embedded function within all units of the corporation. In such a construct, the senior position would report to the COO instead of the CFO. It would function along with quality, supply chain, and production to grind out steady, incremental productivity gains in a very lean environment. Tolerance for errors, downtime, omissions, implementation delays, and cost overruns would vanish. No Chief necessary, thank you. —**Ken Hoyt**

Let me show you why these actions across the country are causing this economic crisis.

It costs about $52,000 per household to survive in just about any town or city in America these days.

Bottom line, the more jobs that pay above the $52,000 level that we do away with, the more that our economy will crash.

As a matter of fact, according to Bureau of Labor Statistics data, we did away with more than 1,200,000 jobs paying an average of $96,000 each and replaced them with jobs paying $34,000 each. —**Virgil Bierschwale**

InformationWeek

Print, Online, Newsletters, Events, Research

John Siefert Senior VP and Publisher, InformationWeek Business Technology Network, jsiefert@techweb.com 949-223-3642

Bob Evans Senior VP and Global CIO Dir., bevans@techweb.com 412-661-3091

Rob Preston VP and Editor In Chief, rpreston@techweb.com 516-562-5692

John Foley Editor, jpfoley@techweb.com 516-562-7189

Chris Murphy Editor, cjmurphy@techweb.com 414-906-5331

Art Wittmann Editor, awittmann@techweb.com 408-416-3227

Tom Smith VP, Web Analytics, tasmith@techweb.com 716-633-0822

Alexander Wolfe Editor In Chief, InformationWeek.com, awolfe@techweb.com 516-562-7821

Stacey Peterson Executive Editor, Quality, speterson@techweb.com 516-562-5933

Lorna Garey Executive Editor, Analytics, lgarey@techweb.com 978-694-1681

Stephanie Stahl Executive Editor, sstahl@techweb.com 703-266-6030

David Berlind Editor At Large, dberlind@techweb.com 978-462-5315

ADVISORY BOARD

Dave Bent Senior VP and CIO, United Stationers

Robert Carter Executive VP and CIO, FedEx

Michael Cuddy VP and CIO, Toromont Industries

Dan Drawbaugh CIO, University of Pittsburgh Medical Center

Kent Kushar VP and CIO, E.&J. Gallo Winery

Carolyn Lawson CIO, California Public Utilities Commission

Jason Maynard Software Analyst

Randall Mott Sr. Executive VP and CIO, Hewlett-Packard

Jeffrey Neville CIO, Eastern Mountain Sports

Denis O'Leary Former Executive VP, Chase.com

C.K. Prahalad Professor of Business Administration, University of Michigan

Mykolas Rambus Head of Technology and Special Projects, Forbes Media

M.R. Rangaswami Founder, Sand Hill Group

David Smoley CIO, Flextronics

Ralph J. Szygenda Group VP and CIO, General Motors

Laurie Zeitlin Senior CIO, Publix Super Markets

REPORTERS

Charles Babcock
Editor At Large
Open source, infrastructure, virtualization
cbabcock@techweb.com 415-947-6133

Thomas Claburn
Editor At Large
Security, search, Web applications
tclaburn@techweb.com 415-947-6820

Paul McDougall
Editor At Large
Software, IT services, outsourcing
pmcdougall@techweb.com 212-600-3187

Mary Hayes Weier
Editor At Large
Enterprise software, business intelligence, software as a service, RFID
mhayes@techweb.com 734-761-9396

Marianne Kolbasuk McGee
Senior Writer
IT management and careers
mmcgee@techweb.com 508-697-0083

J. Nicholas Hoover
Senior Editor
Desktop software, Enterprise 2.0, collaboration
nhoover@techweb.com 516-562-5032

Roger Smith
Senior Editor
SOA, Web services, application infrastructure
rsmith@techweb.com 415-947-6376

Serdar Yegulalp
Senior Editor
Linux, open source
syegulalp@techweb.com 516-562-5029

Andrew Conry-Murray
New Products and Business Editor
Information and content management
acmurray@techweb.com 724-266-1310

K.C. Jones
Associate Editor
E-commerce, Web portals, Internet policy
kconley@techweb.com 212-600-3189

Marin Perez
Associate Editor
Mobile, wireless, smartphones
mperez@techweb.com 415-947-6734

W. David Gardner
News Writer
Networking, telecom
wdavidg@earthlink.net

Antone Gonsalves
News Writer
Processors, PCs, servers
antoneg@pacbell.net

Eric Zeman
Mobile, wireless
eric@zemanmedia.com

CONTRIBUTORS

Michael Biddick mbiddick@nwc.com
Randy George rgeorge@nwc.com
Michael Healey mhealey@nwc.com
Joe Hernick jhernick@nwc.com

EDITORS

Mike Fratto
Managing Editor/Labs
Networking and security
mfratto@techweb.com 315-567-9866

Mary Stevens
Managing Editor/Tech Strategy
mstevens@techweb.com 978-468-2709

Jim Donahue
Chief Copy Editor
jdonahue@techweb.com

Elizabeth A. Chodak
Deputy Copy Chief
echodak@techweb.com

Kay Blough
Copy Editor
kblough@techweb.com

ART/DESIGN

Mary Ellen Forte
Senior Art Director
mforte@techweb.com

Sek Leung
Senior Designer

Katherine Lechler
Associate Art Director

INFORMATIONWEEK ANALYTICS
informationweekanalytics.com

Art Wittmann
Managing Director
awittmann@techweb.com 408-416-3227

Lorna Garey
Executive Editor, Analytics
lgarey@techweb.com 978-694-1681

Heather Vallis
Managing Editor, Research
hvallis@techweb.com 508-416-1101

Please direct all inquires to reporters in the relevant beat area.

Copyright 2009 United Business Media LLC. All rights reserved.

INFORMATIONWEEK.COM

Mitch Wagner
Executive Editor, Community
mwagner@techweb.com 213-514-5597

Michael Singer
West Coast News Editor
msinger@techweb.com 415-947-6346

Cora Nucci
Managing Editor, Features and Reviews
cnucci@techweb.com 508-416-1130

Roma Nowak
Director, Online Operations and Production
rnowak@techweb.com 516-562-5274

Tom LaSusa
Managing Editor, Newsletters
tlasusa@techweb.com

Jeanette Hafke
Senior Web Producer
jhafke@techweb.com

Joy Culbertson
Producer
jculbertson@techweb.com

Nevin Berger
Senior Director, User Experience
nberger@techweb.com

INFORMATIONWEEK VIDEO
informationweek.com/tv

Fritz Nelson
Executive Producer
fnelson@techweb.com

INFORMATIONWEEK BUSINESS TECHNOLOGY NETWORK

DarkReading.com
Security
Tim Wilson, Site Editor
wilson@darkreading.com

IntelligentEnterprise.com
App Architecture
Doug Henschen, Editor In Chief
dhenschen@techweb.com

NetworkComputing.com
Networking and Communications
Mike Fratto, Site Editor
mfratto@techweb.com

ByteAndSwitch.com
Storage
Paul Travis, Site Editor
travis@byteandswitch.com

PlugIntoTheCloud.com
Cloud Computing
John Foley, Site Editor
jpfoley@techweb.com

bMighty.com
Technology for Small and Midsize Business
Frederic Paul, Publisher and Editor In Chief
fpaul@techweb.com

Dr. Dobb's Portal
The World of Software Development
Jonathan Erickson, Editor In Chief
jerickson@techweb.com

TECHWEB

Tony L. Uphoff CEO

John Dennehy CFO

David Michael CIO

John Siefert Sr.VP and Publisher, InformationWeek Business Technology Network

Bob Evans Sr.VP and Global CIO Director

Ann Marie Miller Sr.VP, Corporate Sales, Global Accounts

Eric Faurot Sr.VP, TechWeb Events Network

Joseph Braue Sr.VP, Light Reading Communications Network

Scott Vaughan VP, Marketing Services

John Ecke VP, Financial Technology Network

Beth Rivera VP, Human Resources

Jill Thiry Publisher, Microsoft Technology Network

Fritz Nelson Executive Producer, TechWeb TV

Scott Popowitz Sr. Group Director, Audience Development

UNITED BUSINESS MEDIA LLC

Pat Nohilly Sr.VP, Strategic Development and Business Administration

Marie Myers Sr.VP, Manufacturing

United Business Media

READER SERVICES

InformationWeek.com The destination for breaking IT news, and instant analysis

Electronic Newsletters Subscribe to InformationWeek Daily and other newsletters at informationweek.com/newsletters/subscribe.jhtml

Events Get the latest on our live events and Net events at informationweek.com/events

Analytics Go to informationweekanalytics.com for original research and strategic advice

How To Contact Us
informationweek.com/contactus.jhtml

Editorial Calendar
informationweek.com/edcal

Back Issues 800-444-4881

Reprints
Wright's Reprints, 1-877-652-5295
Web: wrightsreprints.com/reprints/?magid=2196
E-mail: ubmreprints@wrightsreprints.com

Media Kits And Advertising Contacts
createyournextcustomer.com/contact-us

Letters To The Editor E-mail iweekletters@techweb.com. Include name, title, company, city, and daytime phone number.

Subscriptions
Web: informationweek.com/magazine
E-mail: customerservice@informationweek.com
Phone: 888-664-3332 (U.S.) 847-763-9588 (Outside U.S.)

BOB EVANS

A Phenomenal Opportunity For CIOs

Will you make the leap from being 'supporters' of the business to being fully accountable drivers, with considerable skin in the game?

A long time ago, I took a young woman to see a Danish film about existential fear and despair, and the movie was utterly, incomprehensibly terrible. I probably don't need to add that she never went out with me again.

In too many companies, we can see some of that same hollow fear and crushing sense of despair experienced by the miserable wretches in that nightmare of a movie. When businesses spend their days hoping nothing too terrible will happen, and when they lose their will to excel and compete and delight, then they're the walking dead.

So it's great to see that despite the recession, strategic business innovation continues unabated as many companies reconfigure their products and services to meet customer needs. And since CIOs helped create the IT-enhanced business processes behind those innovations, they're perfectly positioned to drive the necessary changes.

The question is, will you embrace this phenomenal opportunity? Or will you take the simpler—but ultimately deadly—approach of saying, "It's not my job"? That's the single-biggest challenge CIOs face: making the leap from being reactive "supporters" of the business to being fully accountable drivers with significant skin in the game for product innovations, brand extensions, and enhanced customer engagement and loyalty. Here are some tangible examples:

> Procter & Gamble launches Mr. Clean Car Washes. CTO Bruce Brown says, "We need to look for new opportunities to allow us to grow. That isn't limited to things within our current business model."

> Xcel Energy launches a $100 million "SmartGridCity" project in Boulder, Colo., to let customers go online to monitor energy usage, select energy sources, evaluate variable pricing programs, and even allow Xcel to monitor and turn down their thermostats.

> McDonald's leans on real-time data analysis to respond to local demand. Touching on the powerful systems McDonald's has created to gain those insights, *The Wall Street Journal* quoted president Ralph Alvarez: "I love numbers. I think data used well really tells a story."

> Wal-Mart's banking business in Mexico has facilities in 425 stores and more than 150,000 customers. Now that it has sound IT banking systems in place, it plans to dramatically expand that business this year.

> Cisco sells servers and Oracle sells hardware and Hewlett-Packard is involved in both. Cisco will start to compete with longtime server supplier HP, which simultaneously has begun cranking up its sale of enterprise networking gear, and Oracle's Database Machine is built on HP hardware. All are examples of companies adopting new approaches to match new market realities.

Yes, all of these ideas required collaboration, CEO sponsorship, flexible thinking, and endless willpower. And you could cite lots of reasons for letting other executives take the lead: the recession, the workload, the uncharted waters, and the risk of ruffling feathers. But if you pass on this opportunity, then others will perceive you—rightly—as detached from the core business. And that's the fast path to irrelevance.

Bob Evans is senior VP and director of InformationWeek's Global CIO unit. For more Global CIO perspectives, check out informationweek.com/blog/globalcio, or write to Bob at bevans@techweb.com. A longer version of this column is at informationweek.com/1224/evans.htm.

LICENSES, MAINTENANCE FEES, IMPLEMENTATION, RE-IMPLEMENTATION, CONSULTANTS, PATCHES... OR NOT.

Imagine an enterprise solution free from constant upkeep and maintenance. Sounds ideal, doesn't it?

Run Workday Human Capital Management, Workday Payroll, and Workday Financials as your global system of record and rid yourself of last century's maintenance burden. With Workday, you're always on version "right now"—you never have to worry again about falling behind, or worse, a reimplementation.

For more information about Workday solutions, visit Workday.com.

workday.

CIO profiles

Read other CIO Profiles at informationweek.com/topexecs

LYNN WILLENBRING
CIO, City of Minneapolis

Colleges/degrees: University of Minnesota, BS; Cardinal Stritch University, MS

Leisure activities: Golf and watching my son play soccer

Best book read recently: *Stone Cold*, by David Baldacci

Smartphone of choice: Windows Mobile, HTC 6800+

Personal computer: Desktops and laptops have really become commodity items. As long as the processor and storage are at current specs, I have no preference.

If I weren't a CIO, I'd be ... unemployed

Career Track

How long at current company: Five years

Career accomplishment I'm most proud of: Within six months of being appointed CIO, I needed to hire my entire executive team, renegotiate our outsourcing contract, and deal with the I-35W bridge collapse. Each of these presented great challenges and immense opportunities. At the end of my first six months, I had changed the department's direction, built credibility for our ability to deliver, and helped propel the city's image throughout the world. No wonder I was so tired!

Most important career influencer: My most important career influencer is my father. He raised me to believe in myself and ignore any artificial limitations. He taught me through example to embrace new ways of looking at problems, to value formal and informal learning opportunities, and to make family a priority.

Decision I wish I could do over: We issued an RFP for a major security product distributed to 4 million customers. We contracted with an outside firm to conduct the durability testing but didn't do sufficient due diligence on the testing firm. As a result, the second-place vendor exercised undue influence and the testing firm backed away from the results. We needed to cancel the new contract and reissue the RFP, costing time and causing cost overruns.

Vision

Advice for future CIOs: Learn your organization's business and make it your own. Understand the operation's pain points, opportunities for innovation, and areas ripe for new ideas. Next, talk with your peers about the business value you can produce. Only then can you raise the subject of how technology can make their dreams a reality. You need to be seen as more than a tech leader—you must be seen as a business leader and a strategic business partner.

The next big thing for my industry will be ... shared services. You'll see more government partnerships spanning the state, county, and local levels. There's too much redundancy in government operations. Last year, Minneapolis and Hennepin County merged their library systems. Libraries remained open, yet administrative overhead was reduced. Many opportunities exist across levels of government, including IT services.

On The Job

IT budget: $26 million

Size of IT team: 94 employees

Top initiatives:

>> City-wide Wi-Fi network for staff and residential use.

>> Improving IT security standards and operations.

>> Initiating an enterprise information management architecture and process.

How I measure IT effectiveness: Internal customer satisfaction, measuring all elements of our operation, is our most critical measurement. If our customers are dissatisfied, it doesn't matter how efficient our operational metrics show us to be—we wouldn't be successful. We also have 38 SLAs with our outsourcing provider, as well as benchmarks.

Autonomy Dominates Enterprise Search*

With 17,000 customers across all sectors and many of the world's largest software companies building their products on Autonomy technology, Autonomy is the undisputed leader in pan-enterprise search. Find out why so many rely on Autonomy's Meaning Based Computing to maximize value and productivity from their corporate information assets.

Global enterprise information infrastructure:

- 1000+ file formats
- 400+ repositories
- Mapped security
- SharePoint governance
- FRCP compliance
- Scalable and extensible
- Language independence

Over 500 advanced automated functions:

- Conceptual search
- Implicit query
- Clustering
- Profiling
- Personalization
- Sentiment analysis
- Audio and video processing

"Autonomy won the enterprise search wars"

—*Computer Business Review,* November 2008

Meaning Based Computing

Pan-Enterprise Search | Information Governance | eDiscovery | Archiving | Rich Media | Customer Interactions

* IDC, October 2008

www.autonomy.com

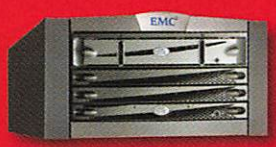
You're the only thing standing between your data and a storage crisis. Want some backup?

Quantum® LTO-4 HH Tape Drive

- Storage capacity: up to 800GB native
- Transfer rates of up to 432Mbps native
- FastSense™ variable speed data matching provides a greener, more cost-effective solution
- Space saving, half-height format with AES 256-bit native Encryption and WORM capability
- Backward read/write compatibility to LTO-3 media and backward read compatibility to LTO-2 media

Quantum

$2586.99
CDW 1381230

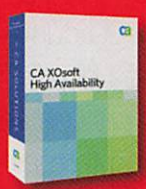


EMC® Celerra® NX4

- Integrates EMC CLARiiON® networked storage to deliver no-compromise availability and advanced data protection
- Easy to install and use, requiring as few as 15 minutes to go from power-up to production
- Included functionality like Celerra Manager, Virtual Provisioning, Automated Volume Management and Celerra SnapSure simplify common administrative tasks

EMC VELOCITY SIGNATURE PARTNER

Call CDW for pricing
CDW 1542955



CA XOsoft™ High Availability r12

- Provides continuous availability to mission-critical systems, applications and data in case of planned and unplanned outages and speeds recovery of data due to loss from human error, system crashes, viruses and other malware
- Adds automated failover and failback to CA XOsoft™ Replication for a higher level of continuity
- Complements your existing backup solution by delivering a higher level of data protection

ca

Call CDW for pricing

We're there with the storage solutions you need.

We don't have to tell you that your data needs are exploding. At CDW, we have a wide range of top-name storage hardware and software to help solve the problem. Our highly trained technology specialists will work with you on a solution that is scalable and secure. Then, we'll custom configure your technology to ensure your data is safe and accessible. So call CDW today. We can't reduce the amount of data. But we can make it less of a problem.

CDW.com | 800.399.4CDW

CDW

The Right Technology. Right Away.®

Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. ©2009 CDW Corporation

QUICKTAKES

MERGER TALK

What An IBM-Sun Deal Could Produce, Destroy

Schwartz open to IBM?

As we went to press, *The Wall Street Journal* had reported that IBM was in talks to acquire Sun Microsystems. Those talks might go nowhere, but here are some of the ramifications of such a deal:

> IBM Owning Java Sun owns Java but has never made much money from it. IBM helped establish Java and has placed a huge bet on it—WebSphere and Rational are Java-based software. Sun made Java an international standard, but only after shopping for a standards body that would let it retain ownership. IBM wanted Java as an open system, to avoid building up a technology that someone else profits from. Sun controls the tests that certify a vendor is Java-compliant, and it has used that control wisely and, for the most part, fairly. But there's always a risk to IBM that it could get in a dispute with Sun and be found noncompliant, a risk it would prefer not to live with forever.

> Sun Software Fits Sun has Java software assets IBM could add to WebSphere, particularly Identity Management. Solaris would get IBM into new areas of big financial services and telecommunications companies that value the performance of Sun servers and Solaris. A deal would bring IBM the ZFS mega-file system and DTrace, a way of tracking performance of specific processes.

> Cloud Computing Sun's plans for a cloud computing platform and related Sun Cloud services are getting a thumbs up for their technology and openness. IBM could wreck that progress.

Developers and technology buyers want to know that their cloud vendors will be around long term, so that the data and applications they put in the cloud (that is, Sun's data centers) will be safe and secure for many years to come. Questions about Sun's long-term viability and independence should give customers pause.

Many think Sun's cloud software would boost IBM's cloud initiatives, which have underwhelmed the market. However, that assumes IBM would make Sun's Open Cloud Platform (comprising Java, MySQL, OpenSolaris, and Open Storage) and Sun Cloud services centerpieces of its own strategy. Early adopters of Sun's cloud technology and services would be gambling that IBM would carry through on the work Sun has begun.

> Sun's Startup Reach IBM is big in the enterprise, and Sun has a client base with high-performing financial services and telecom companies that IBM could expand. But Sun also has a knack with startups, a group that IBM doesn't reach well.

For example, Sun's NetBeans tools get independent developers started in Java; IBM's Rational toolset appeals more to enterprise developers. MySQL is better suited to serving Web pages than IBM's DB2. Sun's open source GlassFish app server appeals to startups, as does its free middleware. IBM could fashion a small-business-oriented package out of many things that Sun does.

> Barriers, To Be Sure There's lingering tension between these two vendors, and it has little to do with the Silicon Valley Casual vs. Buttoned-Down Blue clichés. Incredibly, Sun never joined the leading Java tools effort, the Eclipse programmer's workbench. It resented IBM making Eclipse open source and robbing Sun of the chance to stake out a Java tools market. The name Eclipse is an apt symbol for the bitter rivalry that once existed between the two. (IBM offers other explanations for the name.)

IBM backed Linux in its early days as a way of undercutting Sun, whose servers owned the low end of the Unix market. Sun intensely disliked Linux through much of Scott McNealy's reign as CEO. As Linux gained favor with developers that Sun prized, Sun was deeply conflicted over Linux, until current Sun CEO Jonathan Schwartz's full embrace of open source.

IBM supports open source selectively, fitting it into its business plan, and IBM's discipline could wring value out by improving on Sun's scatter-gun open source approach. *—Charles Babcock (cbabcock@techweb.com) and John Foley*

MAJOR ADVANCE

On Campus, Computer Science Is Back In Style

The number of undergrads majoring in computer science at U.S. universities rose last year after six years of decline. That's a significant turnaround from the trend of students shying away from computer degrees in the aftermath of the dot-com bust and fears that offshore outsourcing would replace U.S. tech jobs.

The Computing Research Association's annual Taulbee Survey of 192 U.S. universities with doctoral programs found that enrollment by majors and pre-majors in computer science increased 6.2% last year—8.1% if declared majors are counted.

While the universities surveyed represent only a snapshot of computer science majors, the survey is an indicator of enrollment trends in the United States, says Peter Harsha, director of government affairs at the Computing Research Association, a nonprofit research organization for academia.

Enrollment seems to be creeping up not just for computer science but also for information systems majors, says Jerry Luftman, professor and associate dean of graduate IS programs at Stevens Institute of Technology and a VP of the Society for Information Management. At least, that's what Luftman is hearing anecdotally, including from admissions officials at Stevens. Applications to Stevens Institute for the fall are up in the "mid-double digits," he says.

For years, U.S. employers, especially in the technology sectors, have complained about falling computer science enrollment. Says Harsha: "This is good news for U.S. industry."

—Marianne Kolbasuk McGee
(mmcgee@techweb.com)

First-of-its-kind experiment

REMOTE RESEARCH

Technology Vs. Malaria

GlaxoSmithKline has spent $300 million over 20 years developing a malaria vaccine. Now, with funding from the Bill & Melinda Gates Foundation, the pharmaceutical maker is about to test its vaccine in the remote "malaria belt" of Africa, using satellites and digital X-rays to help researchers thousands of miles away monitor its effectiveness.

In what GlaxoSmithKline officials say is a first for a pharmaceutical project of this scope, involving 16,000 children over four years, patient clinical data and digital X-ray images will be transmitted from 11 locations in Africa, via GE Satlynx satellite dishes, to a ground station in Europe, and from there to GlaxoSmithKline's data entry system over a virtual private network. Satellite technology is more commonly used in this way for mining and oil exploration.

Part of the approximately $100 million in funding from the Bill & Melinda Gates Foundation, which has made malaria research one of its top missions, went to the purchase of the Philips digital X-ray equipment. That gear will be used to take thousands of chest X-rays during the trial so researchers can track the health of participating patients.

—Marianne Kolbasuk McGee
(mmcgee@techweb.com)

FOLLOW-UP

Silverlight's New Trick

Adobe Flash and AIR, watch out. Microsoft's Silverlight Web development technology will work outside the browser, a feature Adobe offers separately from market-leading Flash. Microsoft just released an early test version of Silverlight 3.0 with that feature, along with a slew of other technologies, at its Web developer conference.

In addition to the ability to run Silverlight applications offline and outside of the browser, Silverlight 3 includes a number of new video, graphics, and data-related features plus the ability to let search engines delve into Silverlight apps. Despite adding that, Silverlight 3 will come in a smaller download package than its predecessor.

Though it still has nowhere near the reach of Adobe Flash, Silverlight has been downloaded 350 million times. The new version should give Microsoft added ammunition against Adobe. *Rolling Stone* magazine will use Silverlight to let readers navigate dynamic versions of back issues.

Microsoft also released Internet Explorer 8,

with improved standards support, security, performance, stability, and other features aimed at stemming market-share losses to Firefox and Safari browsers. And it courted Web developers with new developer-oriented features for its Windows Azure cloud platform, and versions of Microsoft's Expression designer tools that include better prototyping and Web application testing.

—J. Nicholas Hoover
(nhoover@techweb.com)

For more on putting rich Internet applications to work: *informationweek.com/alert/ria*

ANOTHER CONVERT

Rackspace Moves Into The Cloud

Rackspace, a longtime player in the unglamorous world of data center hosting, is reinventing itself as a cloud computing vendor.

Rackspace's new offerings include Cloud Servers, which are on-demand Linux servers, and Cloud Files, an online storage service along the lines of Amazon's Simple Storage Service. These services fit with Rackspace's managed hosting business, giving customers more options for running workloads on Rackspace hardware.

Rackspace gives customers a choice of Linux distributions, starting at 1.5 cents per hour. The on-demand virtualized servers scale from 256 MB to 15.5 GB. Rackspace's service-level agreement promises 100% availability, with credits starting at 5% of monthly fees if its systems fail.

Rackspace has been moving into cloud computing gradually, first through its Mosso division (on-demand file storage), started in 2006, and more recently with the acquisitions of Slicehost (virtual servers) and Jungle Disk (online backup).

With this latest push, Rackspace becomes a full-fledged cloud services vendor. It's ditching the Mosso logo in favor of the Rackspace brand.

How best to get the word out about the company's transformation and get customers involved? Rackspace has hired blogger Robert Scoble to lead a social networking community called Building 43 (don't ask).

Its mission is to be "a place where thought leaders can talk about what is working and what is not, what is next, and what is hype," blogs Rackspace chief strategy officer Lew Moorman. "Cloud computing is one of these hot topics."

Rackspace still has work to do. Some of the missing pieces that it plans to deliver include Cloud Server APIs, on-demand Windows servers, and a dashboard that shows the status of its cloud services.

Scoble: No stranger to hype

Another managed hosting vendor, Voxel, is moving into cloud services, too. Voxel has begun a technology preview, limited to 100 customers, of an on-demand infrastructure service called SilverLining. *—John Foley (jpfoley@techweb.com)*

MOBILE ENTERPRISE

New Apps Help iPhones Get Down To Business

The iPhone is making office calls. Software vendors are building ever-more business applications for the device, and enterprises are starting to embrace it for everyday work.

Workday, an ERP software-as-a-service vendor, says it will post a free application on the Apple App Store that lets customers tap HR and financial systems for their iPhones. The app lets managers sign off on expenses or compensation changes, for example, giving employees faster responses to requests.

Sybase plans to post on the App Store a mobile client "in-box" that, if IT departments support it, will let users securely access e-mail and conduct business functions, such as expense report requests and approvals, from their iPhones. Oracle already has five apps on the App Store, including one for accessing Oracle business intelligence software.

At consumer-goods manufacturer Kraft Foods, employees can access their Microsoft Outlook e-mail and contacts from their iPhones via Microsoft's ActiveSync technology. Supporting employees' iPhones keeps Kraft relevant, says VP of IS David Deidrich. "Devices like the iPhone reinforce to people that we're an innovative company and culture," Deidrich says.

Bottom line: The device is making inroads—without much Apple help.

Still, many companies say they're leery of adopting the iPhone, as Apple doesn't cater to them. Apple offers a utility to configure network and e-mail settings, but it doesn't offer server software comparable to what Research In Motion provides for BlackBerry device management, security, and data synchronization.

And even if these new business applications are free, there are other costs. For example, to use Oracle's app for accessing BI servers, customers must buy a connector to the servers, and that can cost several thousand dollars.

Some companies must be paying up—Oracle says 43,636 iPhone users have downloaded the application. *—Mary Hayes Weier (mhayes@techweb.com)*

Scott Beale / Laughing Squid

POWER PLAY

Smart Grids To Get Jolt From IT

The federal stimulus bill is giving smart grid initiatives a jump start, allocating about $11 billion for utilities to shift their energy supply networks to digital technology, increasing efficiency and reliability and cutting costs. The bill includes $4.5 billion the Department of Energy will use mostly to provide matching grants to utilities for smart grid development and $6.4 billion that probably will be provided to utilities as loans.

Duke Energy has already spent $35 million on smart grid initiatives, and even before the stimulus plan was announced, it intended to spend as much as $1 billion on smart grid projects over the next five years, says CTO David Mohler. About 15% of that spending—as much as $150 million—will be IT-related.

Duke is waiting to get details on the standards that will be required for these projects, the funding mechanisms, and the application process. The government's encouragement of smart grid development is likely to speed up Duke's plans so it can accomplish in one or two years what it had planned to do in five, Mohler says.

For now, he says, everyone "is trying to figure out how to conceptualize what is really going to be required to support smart grids."

Smart grids let utilities better manage the flow of power to homes and businesses, and raise prices when demand is high and lower them during off-peak times. They also give energy customers more information on their energy consumption so they can program high-use electrical appliances like heating and air conditioning systems to reduce consumption at times of peak usage. This technology relies heavily on networks and switches for power management, data collection, communications, and real-time monitoring, as well as building sensors and applications for meter reading and optimizing energy use and distribution.

IT's Role

Automation Systems that can link to programmable appliances so they'll run when energy is least costly

Sensors And Monitoring Devices that track energy usage and distribution trends

Data Collection Systems that provide energy suppliers and consumers with usage data

Communications Systems that relay data along the entire supply system

"IT is going to power this whole thing," says Todd Thibodeaux, CEO of CompTIA. "None of this is going to work without software and hardware."

Duke Energy already has installed 80,000 smart meters as part of a pilot project in Charlotte, N.C., and is expanding that effort. Smart meters let Duke provide its business and residential customers with real-time information on their energy use, as well as data on how much their appliances cost to operate, letting them save money by cutting back usage during high-rate peak times or by replacing inefficient appliances.

The company also plans to build a smart grid in Cincinnati, where it serves 700,000 customers, spending about $1 billion on sensors, intelligent meters, and other system upgrades.

Duke is working to make its substations, transformers, and line sensors operate and communicate on computer networks, monitoring for abrupt changes in the flow of electricity and providing speedy alerts when power outages occur. The aim is to improve efficiency, reduce surges, prevent outages, and help restore power more quickly after it's been lost.

Job Creation

The smart grid effort along with other energy initiatives in the stimulus package could create 370,000 jobs, with 85% of the funds going to IT jobs and the remainder going to construction, says Daniel Castro, a senior analyst with the Information Technology and Innovation Foundation, a Washington think tank. Jobs created will span traditional IT professions, including specialized ones to support smart meters, networking protocols, the communication infrastructure, and related networking hardware and infrastructure, Castro says.

Smart systems have the potential to save energy consumers billions of dollars a year. The Department of Energy's Pacific Northwest National Laboratory ran a demonstration project, including 300 homes in Washington and Oregon, which found that, on average, consumers saved about 10% on their electricity bills. This project provided consumers with real-time price information delivered via broadband so they could adjust usage to take advantage of times when energy was less expensive, and it included equipment that automatically adjusted energy use based on price. The project also provided appliances with computer chips to sense and respond to stress on power-transmission systems.

A separate DOE study reported cost reductions of up to 15%. That could mean huge savings for heavy energy-using businesses, like Google and Yahoo. —*K.C. Jones* (*kconley@techweb.com*)

Jupiterimages

VIRTUAL MAKEOVER

So Much For The Data Center Status Quo

To HP and IBM: Bring it

Why would anyone reinvent the wheel? Well, because then it's your wheel.

Cisco wasn't impressed by the hard-to-manage, virtualization-ignorant servers that Hewlett-Packard, IBM, and Dell make, so it decided to make its own. And along with that new hardware platform, it's teaming with some of the best and brightest data center suppliers to make a system that promises to be the most virtualization-friendly to date.

In doing that, it's betting that it can master the art of blade server manufacturing faster than those rival blade makers can move onto its switching turf. If Cisco's right, the dominant networking vendor will have cracked a major new market. And even if it's wrong, it will have given the blade server market a swift kick that's likely to challenge blade designs and leave businesses with more options.

The networking vendor set up this competition with the launch of its Unified Computing System plan, in which Cisco will sell a new series of blade servers that includes storage capabilities along with virtualization and server management software. Partners include BMC Software, EMC, Intel, Microsoft, and VMware.

Blades as a design are less than a decade old and make up 20% of the server market, says IDC, and they're one of the most profitable server segments. Cisco's idea is that revamped blades can be combined with converged network components, then linked to virtualized network and storage resources under a single management interface.

Companies are likely to move in this direction, since it promises to drive costs out of the data center by prompting more-efficient utilization of devices at every level. It also would move the benefits of virtualization beyond server consolidation into overall management of sets of pooled resources—servers, networking, and storage—again reducing IT operating costs. Cisco says savings could hit 35%.

To accomplish these goals, Cisco must bring a new type of blade to market that relies on a 10 Gigabit Ethernet fabric to feed I/O to both storage and networking devices.

That idea isn't completely new. Since January, HP has offered its BladeSystem with Virtual Connect Flex-10, which divides overall I/O between the enterprise network and iSCSI storage. HP has an interface, Insight Dynamics VSE, to manage the two. Gary Thome, director of strategy for HP's blade and infrastructure software unit, paints Cisco as the "plumber" of network pipes and HP as the general contractor building the house. "We don't see the data center as a network with servers hanging off the end," he says.

Several blade manufacturers, including HP and IBM, already have or soon will have the capacity to combine network traffic and storage data as a single stream coming off the blade to networking devices on the blade chassis. Cisco "incrementally goes a little further" in driving that convergence, says Burton Group analyst Nik Simpson.

But an incremental step may give Cisco a foothold, since it's the first major entrant into the blade market since Dell in 2001. Still, it will have to win over a new layer of data center managers without the incumbent advantage it has in networking, which will require continually refining the design and manufacturing of blades, something that Dell, HP, IBM, and Sun have worked on for years. "Cisco has never moved into a market this size with so many established incumbents," Simpson says.

Cisco knows who's in its way and how its strategy can disrupt networking sales partnerships with HP and IBM. "We focus on market transitions, not competitors," Cisco CEO John Chambers says. "You've got to play the hand this market has dealt you."

BMC Is Pivotal

Cisco has assigned a key role in the process to BMC, the systems management vendor, to deliver a combined management tool to supervise the different virtualized resources. Providing one management interface for servers, networking, and storage has been a stumbling block. The storage industry hasn't come up with a single interface for storage, because of competing vendors and ineffectual standards.

This time, virtualization vendors Mi-

GET A COPY For a link to this article, send a text message to 88411 that reads: mar2301YourE-mail@YourDomain.com. SMS rates apply.

crosoft and VMware—both partners in the Cisco project—may have the heft to overcome those barriers. Each can lay down a storage API for virtualized systems and insist storage vendors link their devices to servers through it, Simpson says. Such a unified storage pool is needed to realize the benefits of virtualization.

To move virtual machines from physical server to physical server, the data center needs a single cluster file system underneath them. VMware gets around the fractious industry by using its own cluster file system. It's promising a storage API in its vCloud initiative that will let any storage vendor adopting the API participate.

Beyond storage, there's still the challenge of delivering a single management interface that cuts across servers, storage, and networking. Cisco has vested BMC with delivering a tool to orchestrate communications on a 10 Gigabit Ethernet fabric. It will understand how to allocate work across pooled networking, processing, and storage devices, monitoring and adjusting as loads change.

Current systems require managers to pre-allocate resources, and the tendency is to overallocate. Since future demand can't be completely predicted, server admins guard against failure by piling on more CPU cycles and more memory and storage than is needed. To balance workloads well enough that managers don't feel the need to overprovision, Cisco needs a new management tool that can view each virtualized resource and manage them as part of a single system.

> The pain is where ***VMs*** and the virtual network meet ***storage***, says BMC's ***Beauchamp***.

BMC's flagship product, Patrol, was among the earliest to manage cross-vendor virtualization. Now it will try to graft on cross-resource virtualization. "The pain point," says BMC CEO Bob Beauchamp, "is where virtual machines and the virtualized network meet up with storage."

Cisco and its partners will truly simplify data center operations if Cisco indeed produces standard Intel-based blades with a unified management tool that assigns them VMs, allocating and reallocating their resources based on need, and it's able to move them around physical servers atop a virtualized storage system.

The manager of the virtualized data center "shouldn't have to worry how many network interface cards are on the server or how much memory is available," says Beauchamp. Indeed, the Cisco blade design is aimed at making such configuration problems an issue of the past. ***—Charles Babcock***

(cbabcock@techweb.com)

A NEW GAME

Compete, But Not With Standards

Cisco's unified computing plans provide a lot of ammo for friends and foes. On the upside, it's hard to argue that existing server, storage, and networking architectures render a virtualized data center hard to manage.

Certainly, the need to attach systems to multiple fabrics, all with inherent limitations and architectures never imagined for highly dynamic, virtualized environments, is a huge problem.

However, Cisco's discussions of an open standards environment for both a unified network and a unified computing environment sound suspiciously like early proclamations for its Network Access Control Alliance. That alliance, driven by Cisco's proprietary protocols, went from "all are welcome" to Cisco tossing ConSentry for making products that looked too much like a competing switch.

Another problem then was the eye-popping price tag for a full-blown Cisco NAC implementation. Cisco eventually had to roll out a NAC appliance that was price competitive with other products. The lesson is that Cisco has a mixed track record in reading what the market will bear in terms of the cost and vendor lock-in.

But the NAC competition was mostly small players. Not so in the data center. HP has been steadily moving its ProCurve switching unit closer to its server and storage divisions. IBM and Sun have vested interests in choice in the data center. VMware and Microsoft have their own visions of the virtualized data center, and Juniper and Brocade, though smaller, also plan unified data center architectures.

Everyone will win in this evolution, but only if the competition is within standards, and not with standards.

For enterprise architects, the unified data center architectures likely will take a path like VoIP adoption. Rip and replace isn't needed; you can adopt a single fabric through the normal cycle of equipment amortization. In terms of standards, management, and security, there's so much to be worked out and learned that the amortization cycle should be treated as a friend, not something to be worked around.

—Art Wittmann

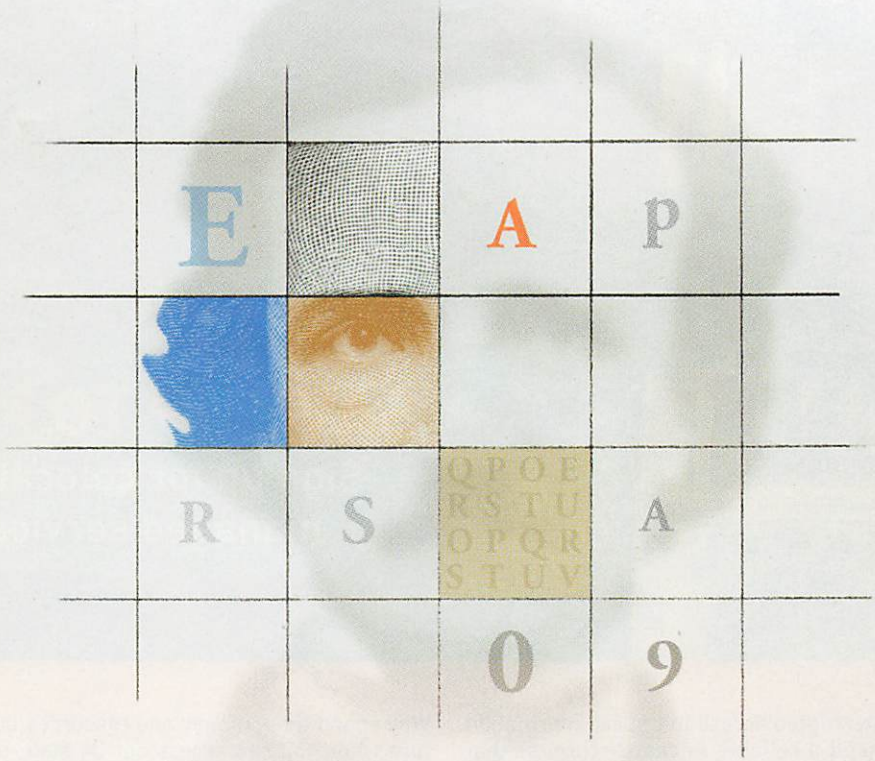
(awittmann@techweb.com)

RSA® CONFERENCE

WHERE THE WORLD **TALKS SECURITY**

When the next security threat hits, be ready to hit back.

U.S. businesses lost an average of $289,000 in 2008 to security breaches.† No business or organization can afford exposure to that kind of risk. Educating yourself on the strategies and solutions you need to stop this exposure is your imperative. RSA® Conference is the one place where you can meet with experts, colleagues and vendors to find solutions that will positively impact your information security programs now and in the future. It's a security investment you can count on to deliver results — and it's all at RSA® Conference 2009.



REGISTER NOW

APRIL 20–24, 2009 | MOSCONE CENTER | SAN FRANCISCO

WWW.RSACONFERENCE.COM/2009/IW

ENTER PRIORITY CODE: IW039

†Computer Security International (CSI) Computer Crime and Security Survey, 2008.

You trust us when it comes to the unexpected.

But the expected is just as important.

SAVE UP TO $15,000

Sign up for colocation or managed services today.

Your users demand uninterrupted access to critical information and applications. You need a reliable infrastructure, so that you can spend more time on the big picture, rather than patching cracks in the system. With SunGard **AdvancedHosting**℠, you can be confident, knowing that you are tapping into the same resources, expertise and infrastructure that have enabled us to maintain a 100% recovery record.

AdvancedHosting℠ is SunGard's full range of managed services that can be scaled to meet your specific needs and budget. We offer everything from standardized colocation to fully managed infrastructure hosting with 24/7 monitoring and support.

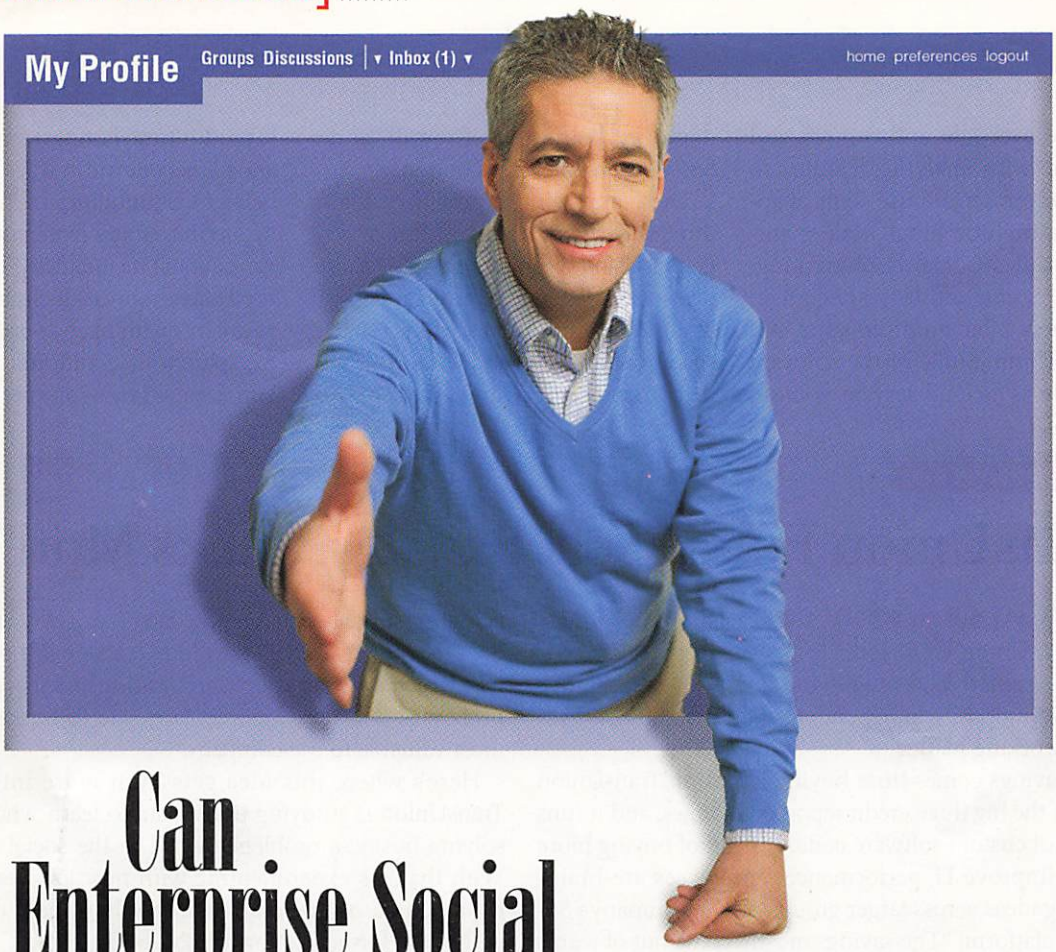
Why spend time, money and resources building an infrastructure when you can access our 34 state-of-the-art IT facilities and connect with 25,000 miles of redundant global network? The advanced system we have in place is tried and trusted and allows you to focus on growing. And as you grow, so can your hosting solution.

With SunGard you're not just prepared for the worst. By maintaining higher levels of availability every day, you're prepared to be the best.

To learn more about keeping your people and information connected with AdvancedHosting℠, visit http://www.sungardservices.com/MS5 or call 866-481-1429.

Offer expires 6/30/09. Visit www.sungard.com/MS5 for full offer details and restrictions.

SUNGARD® Availability Services | Keeping **People** and **Information** *Connected.®*



Can Enterprise Social Networking Pay Off?

By Andrew Conry-Murray

With no hard ROI metrics, companies are looking for other ways to measure value

Bob Pearson is convinced that enterprise social networking software—blogs, wikis, social bookmarking, and the like—will transform the way Dell works. But the VP of communities and conversations at Dell struggles to quantify the business value of these tools.

When these social networking tools are used to connect with customers and partners, there are usually ways to calculate a payback. But when companies provide them to employees, they're often going on little more than a gut instinct that these applications will be good for business. "It's not like you're creating revenue," Pearson says.

The dearth of hard ROI metrics should give CIOs pause. But at the same time business leaders fear falling behind the technology curve, which is when employees start finding their own solutions. Don't let caution or fear overwhelm good sense. It's possible to construct scenarios where social tools benefit workers. If these scenarios resonate, a low-cost pilot is a good first step.

Enterprise social networking apps offer many of the features of consumer social apps such as Facebook, but

internet evolution

Part of an ongoing series assessing the future of the Internet. For more, check out *internetevolution.com*. Contributors to its ThinkerNet blog include Andrew Keen, author of *Cult Of The Amateur: How The Internet Is Killing Our Culture*; and internationally acclaimed videographer and fly fisherman James Lambie. Internet Evolution also features industry-specific content in its IT Clan and Security Clan sections.

with more oversight and control, and they come with analytics features to measure adoption and use. Typical applications include blogs, wikis, employee profiles, social bookmarking, and tags. Some vendors specialize, while others offer multiple apps in a single platform. Some of the software is available as a cloud service, some is deployed behind the firewall, and a few vendors offer both options.

These apps aim to provide value in three ways. First, they can bridge geographical and organizational information divisions by moving conversations out of e-mail and hallways and into shared spaces such as blogs and wikis. This way information becomes searchable, serendipitous connections are made, and ideas pollinate in ways they couldn't before. Communities of interest spring up around subject matter rather than organizational hierarchies. For instance, a hardware engineer in Ireland who experiments with open source software in his spare time could link to a blog on Linux started by a software developer in

ONE COMPANY'S ROI

TransUnion Finds Cost Savings, Seeks More

Can't put an ROI on social networking? TransUnion CTO John Parkinson has his: an estimated $2.5 million in savings in less than five months while spending about $50,000 on a social networking platform.

The savings comes from buying less stuff. TransUnion is one of the big three credit report companies, and it runs on a lot of custom software code. Instead of buying more gear to improve IT performance, employees are brainstorming ideas across larger groups on the company's Socialtext platform. "The savings mostly come out of teams that would have historically said, 'Buy me more hardware' or 'I need a new software tool' or 'I need more processing capacity,' who figured out how to solve their problems without asking for any of those things," says Parkinson.

While the estimated ROI numbers look promising, Parkinson stresses that wasn't why TransUnion got started with social networking. He thought it would meet a need for employees, and, just as importantly, "I wanted to defend against too much of this going on in public," he says.

TransUnion knew it was time to provide an internal social networking tool when people started asking for permission to set up an employee group inside Facebook. So the company did a quick survey. About 2,000 of its 2,700 employees were using some kind of public social networking tool. Since the company deals in credit reports, it wasn't keen on employees gathering to talk shop on the public Web. So the IT team set up Socialtext inside the company firewall. Parkinson liked the features of the online network Ning but decided he needed the software on its own network for security.

The Socialtext platform has profiles, a wiki capability, and instant messaging. Perhaps most powerfully, employees can use it to ask questions of a broad group. People can tune their settings to allow all questions or allow only those from certain groups or people. But all the questions and answers get written to the database. The platform lets people vote on answers they like. It also has tools to analyze which answers people are reading and using to solve problems, and how answers correlate to topics that are most valuable to the company.

Here's where this idea gets even more interesting. TransUnion is studying usage data to learn who's best at solving business problems raised in the social network. With that, it's experimenting with new job descriptions for a couple of them, so that handling these questions within the forum is a formal part of their role.

"It was never very clear to us, looking in, who the authoritative sources were, who was good at solving problems," Parkinson says. "Now we can see a lot of that because we're starting to see patterns emerge, to see who's following whom, who's the good source of questions, who offers good answers. All those things that you sort of know by the grapevine, we now have data for."

TransUnion's Socialtext platform co-exists with Microsoft SharePoint, which has some of the same wiki and networking tools. Parkinson draws the line this way: If an activity is part of a formal process, the collaboration should happen in SharePoint. In bringing on a new customer, for example, many formal steps are involved, and SharePoint has workflow tools that allow for collaboration while making sure the necessary hand-offs happen and the process is completed. "On the other hand, if I want to improve the process of bringing on a customer, I launch a discussion on Socialtext," Parkinson says.

Extrapolating on the company's success so far, he hopes the platform can deliver $5 million to $8 million in total savings this year. The platform only went live in October, and company-wide in January. Will the momentum continue? Will people find uses that are less productive? Parkinson isn't declaring victory yet, but he likes what he's seen. —*Chris Murphy (cjmurphy@techweb.com)*

Australia. Even though the hardware engineer isn't part of the software development team, he could follow discussions and share ideas, some of which the dev team may find useful. "There was no means to have conversations like this two years ago," says Len Devanna, director of Web strategy for EMC, which started using Jive's Social Business Software platform in late 2007.

The second way social apps provide business value is by letting people add context to information stores, which helps others identify what's useful to them and can make search results more relevant. Social bookmarks, for example, let people share links to a content source—a Web page, blog, white paper, etc.—that they found useful. Tags are an employee-driven taxonomy that ensure that any one content source is grouped with related content. Tags, social bookmarks, and other social networking tools help bring order to the avalanche of information that employees have to sift through.

"If you're in research and development, it's good to see the links that your team leader or chief scientist for a project has posted on a topic," says Dave Biersach, an associate director at Pfizer, which uses Scuttle, an open source software package for social bookmarking.

Third, enterprise social networking helps people find and connect to coworkers through user profiles, expert search, and social graphs that provide a visual map of an employee's connections with co-workers. EMC's Devanna encourages employees to fill out detailed profiles on the Jive platform, because that information goes into the search engine that lets users find coworkers with domain-specific knowledge. Pfizer scientists will do people searches to see if another scientist in the company has worked on a particular

GET A COPY For a link to this article, send a text message to 88411 that reads: mar2302YourE-mail@YourDomain.com. SMS rates apply.

5 Best Practices | SOCIAL NETWORKING IN BUSINESS

1. Test The Waters The widespread adoption of consumer social networking applications such as Blogger, Facebook, LinkedIn, Twitter, and Wikipedia has people asking, "Why can't I have something like that at the office?" They can, whether or not the company provides it.

In the absence of company-provided tools, employees will take it upon themselves to integrate consumer apps into their work lives, whether it's a skunk works project running open source software on an engineer's spare laptop, or product managers building a wiki on a Web collaboration platform that they pay for with a credit card.

Companies may find it useful to try out social networking with a low-cost pilot. Open source tools are widely available to experiment with. Another option is hosted applications, which are easy to get up and run, and usually offer a small number of corporate licenses at a very low price.

2. Set Modest Expectations To get a project off the ground, don't lay on the hyperbole about the transformative power of social networks. Don't promise executives that enterprise social networking will unleash, ignite, or synergize anything.

Pitch the project as a pilot, with the option to walk away after a quarter or two if it doesn't work out. Describe one or two general business improvements you think are achievable. Set reasonable goals for user adoption, and salt your initial deployment with a few teams that are eager for these kinds of tools. And keep an eye out for ways to measure business value. You may not be expected to produce hard numbers from a pilot, but corporate management will want to know the payback down the line.

3. Don't Let Fear Strangle Growth Many organizations are wary of giving a voice to employees because they don't know what they'll say. Businesses also worry that employees will overdo the "social" aspects of these applications.

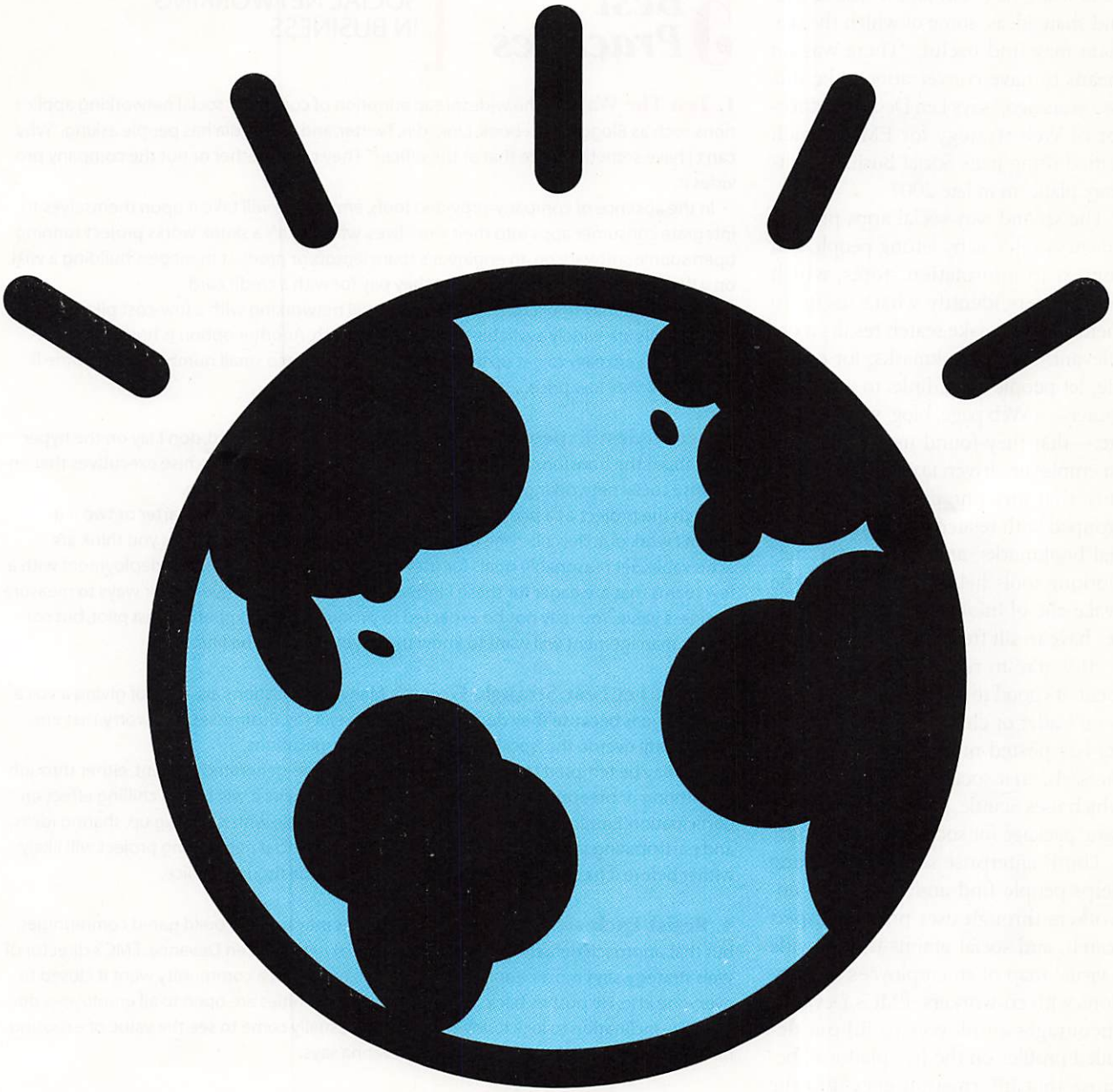
You may be tempted to vigorously police employee-generated content, either through monitoring or preapproving posts. Resist that temptation; it will have a chilling effect on participation. Employees need time to grow comfortable with speaking up, sharing ideas, and participating in company-wide conversations. A social networking project will likely wither before it has a chance to grow if people fear the thought police.

4. Resist Exclusivity Business units or teams may want to build gated communities, but that approach defeats the purpose of a social network. Len Devanna, EMC's director of Web strategy, says most people who come to him to start a community want it closed to everyone else. He pushes back: "99.9% of our communities are open to all employees, despite the inclination to lock it down." Managers usually come to see the value of exposing discussions to the broader community, Devanna says.

5. Don't Forget About Search Search underpins the value of social networking platforms. A crappy index and search engine will make social applications less useful. As you investigate products, grill the vendors on their search capabilities and road maps. Be sure the search engine allows for user-generated feedback such as tags and content-rating systems, because the point of social networking in business is to let people provide input into the relevancy of content and people.

A good search system also helps prevent your social networking platform from becoming another silo, so consider federated search. Ideally, the search engine inside an enterprise social networking platform should be able to index content in other systems, query third-party search engines to pull results from other information repositories, and be open to requests from other engines. *—Andrew Conry-Murray*

IBM THINK



Conversations for a Smarter Planet

A mandate for change is a mandate for smart.

The world is ready for change–that much is clear.

For leaders of all kinds, this moment presents a rare opportunity. Our planet is not just getting smaller and flatter. It is also becoming smarter.

That is, intelligence is being infused into the way the world literally works–into the systems, processes and infrastructure that enable physical goods to be developed, manufactured, bought and sold. That allow services to be delivered. That facilitate the movement of everything from money and oil to water and electrons. And that help billions of people work and live. This means we actually have the potential to change the way the world works.

That's good news, because the systems by which the world works today are increasingly unsustainable. They may be networked, but it turns out that being connected isn't enough.

It isn't enough to prevent us from wasting too much energy. From spending too much time in traffic. From producing food too expensively and wasting too much of what we produce. From missing too many sales opportunities and disappointing too many customers because of inefficient supply chains. From making too many medical errors and spending too much to provide healthcare for too few. And most obviously of late, from failing to manage financial risk.

Now, with computational power being built into things we wouldn't recognize as computers, any person, object, process or service and any organization, large or small, can become digitally aware, connected and smart. Consider the changes already under way.

Smart traffic systems are helping to reduce gridlock by 20%, cutting pollution and increasing ridership on public transit.

Smart food systems based on RFID technology embedded into supply chains are monitoring the flow of meat, poultry and other items–from the farm to the supermarket shelf.

Smart healthcare systems are helping to lower the cost of therapy by as much as 90%.

Police departments are correlating street-level information from myriad observations and devices to identify crime patterns–helping prevent crime rather than simply punishing it.

The list is long and the transformation is just beginning. Its benefits will be reaped not only by large enterprises, but also by mid-sized and small companies–the engines of economic growth everywhere–and by individuals and communities around the world.

Imagine how a smarter planet will transform the ways we pursue everything from economic growth to societal progress to environmental sustainability to cures for disease, as well as the ways we interact with each other and with the world.

The opportunity is before us, and the moment will not last forever. The question is, will we seize it? As we look to stimulate our economy and rebuild our infrastructure, will we simply repair what's broken? Or will we prepare for a smarter future?

Let's build a smarter planet. Join us and see what others are thinking at **ibm.com**/change

IBM, the IBM logo and ibm.com are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide.
A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

compound, Biersach says, or sales reps will search for other reps who have previously worked in their territories.

No Pressure—Yet

The use cases described above show enterprise social networking's potential business value, but they're too squishy to be used as hard-dollar metrics. For some companies, that's OK because no one is demanding cost justification—yet. EMC is in its honeymoon period with social networking. "I think I have six to 12 months before I have to quantify hard savings, and I'm not sure how I'm going to do that," Devanna says.

But he does have a few ideas. One metric is user adoption. EMC has about 10,000 wiki documents and 3,000 blogs across 150 topical communities on its Jive platform. Of its 38,000 employees globally, the platform has about 10,000 active users and another 15,000 lurkers who are watching conversations or consuming content but haven't posted anything themselves, Devanna says.

Adoption doesn't necessarily tie to ROI. When Devanna finally has to provide some numbers, he expects to be able to point to a decrease in the volume of e-mails and attachments across the company's network, and the resulting reduction in storage costs. Instead of a 20-MB PowerPoint being sent back and forth among 10 co-workers, it can sit in a common workspace where people can post comments. Devanna says he hasn't tried to measure the decrease in e-mail yet, but he's sure it's happening.

Devanna believes that social networking also will help EMC get new products to market faster. Before these apps were available, ideas for new products bounced around among a limited set of employees. Now they can be teed up on a platform with 25,000 pairs of eyeballs on it. The theory is that good ideas get validated and bad ideas get discarded more quickly, which leads to faster product development, he says. However, he admits that he has yet to prove this theory.

Devanna also may be able to point to one other return: The company launched the internal social apps to gain proficiency in creating external customer communities.

Pfizer hosts an enterprise wiki, called PfizerPedia, which was started as a side project by a handful of scientists in the company's global R&D unit, Biersach says. The wiki, which runs on the open source MediaWiki software (the same software that underlies Wikipedia), grew so popular that it's becoming a formally supported IT platform. It has more than 2,300 users across multiple business groups, including sales, IT, and manufacturing, who use it to create knowledge bases and share documents. Pfizer also has a 3-year-old enterprise blog that runs on Drupal, the open source Web content management software. Pfizer executives use the blog, which is getting 10,000 visits a month, to communicate with employees about Pfizer's business activities.

In addition to the wiki and blog sites, Pfizer's internal site for social bookmarks lets employees share links to content and Web sites they find relevant to their work. The company also is taking advantage of the social networking features built into SharePoint, which let employees create personal profiles. Departments and project teams also can create blogs and wikis associated with specific business domains inside SharePoint, such as a sales team or a specific department.

Despite Pfizer's investment in social networking tools, Biersach says it's all but impossible to calculate ROI. Instead, he measures value by gauging how much the company's social networking applications entwine themselves into employees' daily work lives until they can't imagine living without them.

Like EMC, Pfizer measures the number of users and the frequency of use. Out of 98,000 employees, 63,000 are regular SharePoint users, and the company has more than 6,000 active Share-

IDEA MANAGEMENT

Just How Wise Is The Crowd?

While companies struggle to quantify the value of enterprise social networking, the return from one subset of applications in this category is a no-brainer. Innovation or idea management apps provide a forum for customers and employees to share information and ideas on how to improve products and services.

One large retail chain routinely runs events to generate ideas on how to increase revenue, cut costs, and streamline business processes. Using a hosted platform from a startup called Spigit, the retailer invites targeted groups of employees, such as store managers or the logistics group, to log in to a Web application to submit ideas, and review, rank, and comment on ideas posted by their peers.

Last year, the company ran an event for 4,000 employees on the subject of improving its energy efficiency and cutting costs. The event generated thousands of ideas. A review team narrowed those ideas to a checklist of 20 items, such as switching off electronics products on display racks. "If each store follows that checklist, we estimate the company will save $30 million to $40 million per year," says the retailer's director of strategic services.

Another event for store managers focused on cutting costs and improving customer service. One idea from that event will save the company $8 million. "IT and senior VPs ask how we measure ROI for Spigit," the director says. With numbers like that, the answer is easy.

—Andrew Conry-Murray

Point sites. Biersach's team, which regularly reviews SharePoint activity logs, defines a site as active if changes were made to it in the past 30 days.

Those metrics have to be tempered by the user community itself. "If one system has 3,000 users and another has 60,000, but the 3,000 are all doing clinical research and using it daily, you have to factor in that qualitative value," says Biersach.

Another measure of the value of social networking apps is by the number of other applications that can be linked to them in ways that enhance productivity. Pfizer is considering using Web services calls between SharePoint and its Siebel CRM applications to post a daily list of sales calls on salespeople's SharePoint MySite profile pages. "A system that's highly integrated into other systems is indicative of high value," Biersach says.

Another way to measure the value of social networking tools "is to relate them to process improvements rather than time savings or loose efficiency gains," Biersach says. For instance, Pfizer's IT department created a wiki where users can search for solutions to common laptop and desktop problems instead of calling the help desk. While Biersach doesn't have hard data to quantify the reduction in help-desk tickets because of the wiki, he knows people are using it, and he has anecdotal evidence that they've resolved problems without having to open a ticket.

Similarly, one of Pfizer's enterprise wikis walks developers through the steps to check source code into an enterprise code repository. The repository helps the company better manage its proprietary software. Hundreds of developers use the repository, Biersach says, but its support team is quite small, in part because the wiki cuts down the number of help desk requests.

A SAMPLING OF **WHAT SOCIAL NETWORKING VENDORS OFFER**

Drupal	Blogs and profiles
IBM Lotus Connections	Blogs, profiles, social bookmarks, communities, and more
Jive Software	Wikis, blogs, profiles, social bookmarks, tags, discussions, and more
Microsoft SharePoint	Wikis, blogs, profiles, and communities
NewsGator	SharePoint add-ons for tags, tag clouds, expert search, discussions, and more
Scuttle	Social bookmarking
Socialtext	Wikis, blogs, profiles, social bookmarks, and microblogging
Telligent	Wikis, blogs, profiles, groups and communities, social analytics, and more

Anxiety-Prone Apps

Suggest bringing social networking tools into your company and wary corporate managers are likely to raise a host of issues. Besides the lack of reliable formulas for measuring ROI, there's the bad rap these apps get from consumer-focused cousins such as Facebook and Twitter, which can come off as vehicles for sophomoric self-aggrandizement. Social networking also raises policy questions around content control, compliance, and moderating employee behavior. These are important concerns. Most of these applications offer basic access controls and manage users' ability to edit, copy, and share content, but current tools may not have all the answers you want.

At the same time, no one wants to lose out on a potential competitive advantage. In a Burton Group study of 21 businesses, most believe their social networking initiatives lag behind those of their industry peers or the market in general. Deloitte, in its technology predictions for 2009, expected an "explosion" in social networking tools, trials, and in-house deployments at companies as well as U.S. government agencies.

Business leaders also know that social networking will find its way into their companies if IT doesn't provide it. Beyond Facebook and Twitter are scores of wiki, blog, and collaboration sites that are free, or cheap enough that a product manager can buy a half-dozen accounts with a credit card and upload next quarter's product road map in five minutes. Even if the ROI is never clear cut, technology managers may be compelled to invest in these apps to keep employees from adopting public systems that are outside company control.

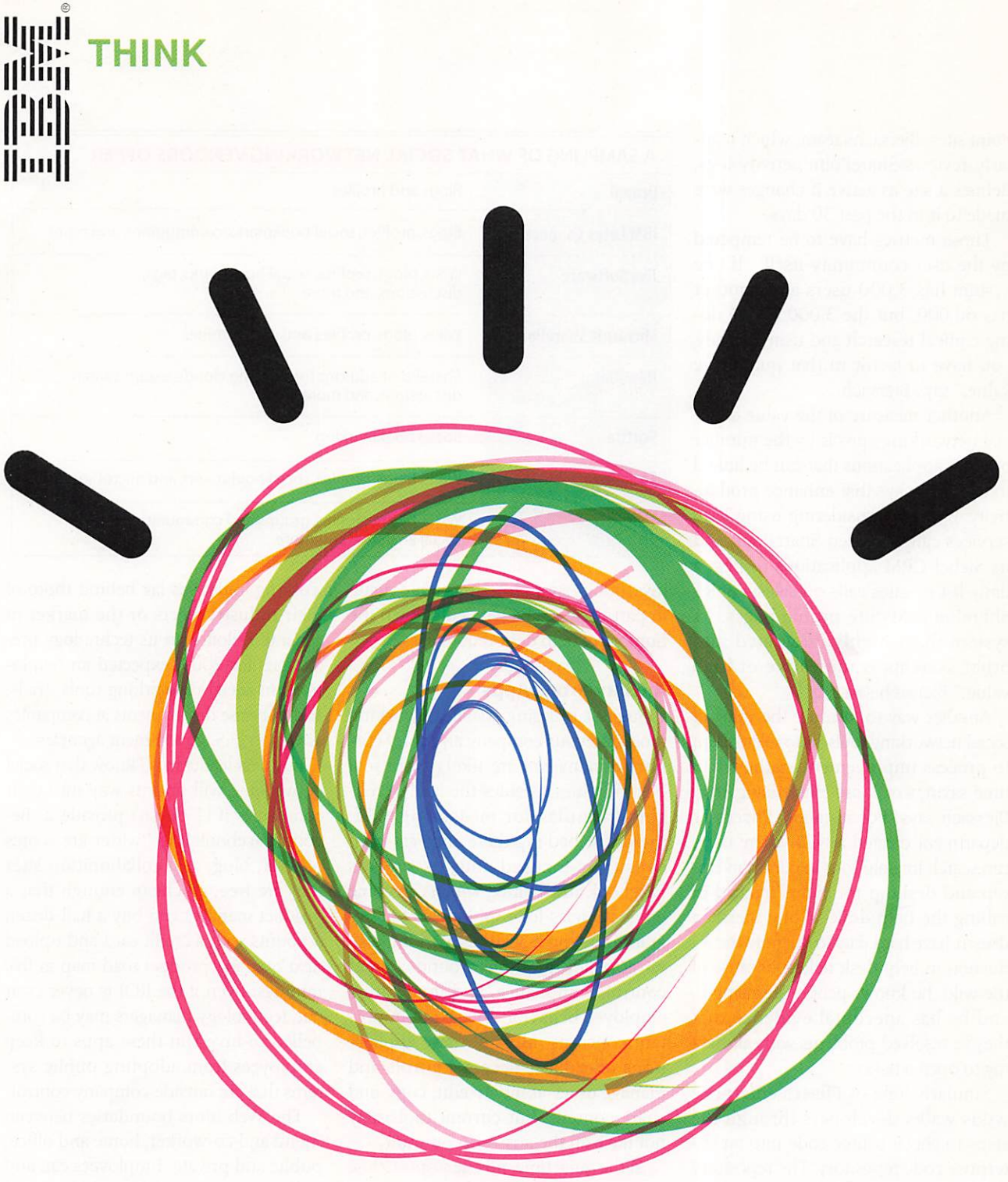
The Web blurs boundaries between friend and co-worker, home and office, public and private. Employees can and will get access to blogs, wikis, and tools that let them communicate, collaborate, and share information. The real bottom-line question might be, how much is it worth to you to have employees using applications you control and manage?

Write to Andrew Conry-Murray at acmurray@techweb.com.

MORE AT INTERNETEVOLUTION.COM

Should legislation be subjected to debate online before it's voted on in Congress?
informationweek.com/1224/ie_vote.htm

Here's how not to draw attention to a vulnerable Web site.
informationweek.com/1224/ie_site.htm


THINK

Conversations for a Smarter Planet

How we can make our smart systems smarter.

The planet we live on isn't just getting smaller and flatter–it's also getting *smarter*. By "smarter," we mean a world where digital intelligence can be embedded not just in individual things, but also across entire systems, impacting everything from traffic flows to electric power to the way our food is grown, processed and delivered.

But you might be surprised to learn that information technology–which ought to be the smartest aspect of the planet–is itself in need of an intelligence makeover.

It's not a problem with the technology per se. Servers, storage, PCs, software, networking gear and the Internet will all continue to become more powerful, affordable and available. And according to IDC, data volumes and network bandwidth are expected to grow tenfold in the next three years.

The problem is how all this technology is currently configured into systems–the way data centers are designed and operated, the way applications are developed and deployed, and the way PCs and servers are managed, upgraded and kept secure. The fact is, the IT systems that underpin so much of how the world works must become much smarter.

How much smarter? The average commodity server rarely uses more than 6% of its available capacity. In some organizations, as many as 30% of servers aren't utilized at all; they simply waste energy and valuable data center space. IT energy consumption is expected to double in the next five years. In some cases, nearly 70% of companies' IT budgets can be devoted to managing, maintaining, securing and upgrading their systems rather than building new capabilities, services and applications.

And consider what's coming: hundreds of billions of smart things–sensors, cameras, cars, shipping containers, intelligent appliances, RFID tags by the hundreds of millions–all becoming interconnected. This will enable new, highly flexible ways of interacting with customers, employees, patients and citizens from any device, anywhere. The resulting volume of data promises insight and intelligence to solve some of our biggest problems–but only if we can process and make sense of it in real time.

If we are going to realize the enormous potential of a smarter planet, we have to reinvent the IT of the 21st century in the same way that we industrialized our factory floors in the 20th–making it more efficient, more dynamic, less complex and less costly.

Fortunately, smarter computing models are at hand. With "service oriented" software, companies can unlock business services from the underlying technology, so their software can be changed and reused flexibly–at a fraction of the cost of developing it from scratch. Virtualization can help companies reinvent their data centers, eliminating up to 70% of their servers and 80% of their floor space. Service management software can orchestrate all of these systems from one place, while letting IT users serve themselves, cutting administrative costs. Together, these new capabilities enable "cloud computing," a new way of looking at IT as a distributed capability, which can be tapped into simply and easily.

Information technology has taken us a long way over the past 50 years. But seizing the opportunities before us will depend on more than intelligent machines. It will depend on spreading intelligence across our technology infrastructures. Let's build a smarter planet. Join us and see what others are thinking at **ibm.com**/change

IBM, the IBM logo and ibm.com are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide.
A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

By Marianne Kolbasuk McGee

Pay For Performance

The downturn is making it harder for companies to tie outsourcing to broader goals than basic cost cutting

Sek Leung

Risk-reward IT outsourcing contracts, where service provider fees are tied to business outcomes, have been viewed as the next tier of maturity for the outsourcing industry. But the slowing economy has dampened interest in the model, and getting to that tier is going to take longer.

That's not what we expected. Before the recession, interest had been growing among IT outsourcers and longtime customers in forging relationships where both parties share in benefits reaped through working together, but also share in any pitfalls. Outsourcers looked for "partnerships." To do this, they needed to shift to "higher-level" deals that didn't focus solely on cost cutting—including offshore labor arbitrage—but on strategic measures such as revenue growth and customer satisfaction.

The reality is that such relationships are complex to set up, difficult to execute, and riskier, which means they require deep trust and a long-term view. All those obstacles become bigger in a downturn.

Companies haven't given up the pursuit of innovation, and they're still working closely with their outsourcers, but they're paring down their project lists. And if there's a revenue-generating project to be done, CIOs are likely to want their own staff on it, rather than share the rewards with a services provider. "If you have 100 discussions with clients about risk-reward contracts, maybe only 10 will end up doing them," says Ray Strecker, head of Tata Consultancy Services' North America consulting practice.

Eighteen months ago, two goals frequently came up during client discussions, Strecker says. One is still common: how to take direct costs out of the client's business, primarily with IT but sometimes through other operations, such as human resources.

The second theme that almost always came up was how to shift the IT spending mix from running the business—support, security patching, data center operations—to fostering innovation. In those conversations, cost cutting was a way to "free up" funds for other purposes, Strecker says. In the last few months, however, the talk has shifted back almost solely to cost cutting as a way to "batten down the hatches," he says.

Some clients continue to ask TCS where it can be a strategic partner in achieving objectives beyond cost cutting, such as improving customer

service. Yet, even in the pockets of innovation where there is a shared incentive to improve performance, "we're not seeing revenue-sharing models," says Sultan Khan, head of TCS IT strategy and governance for North America, citing the complexity of such arrangements.

Vincent Cirel, senior VP and CIO of Norwegian Cruise Line, says too many CIOs think of pay-for-performance narrowly—as the financial penalties outlined in service-level agreements, rather than incentives to perform better. SLAs aren't of much use to a CIO. If performance tanks to the point that it triggers an SLA, it will give the lawyers some work, but the CIO and business managers relying on it are out of luck. So when Norwegian Cruise Line inked a 5-1/2-year deal in October with IBM to run its reservations as an online service, Cirel included performance incentives (which he declines to detail).

Follow The Money

Between 15% and 30% of Computer Sciences Corp. contracts have risk-reward provisions. Like other outsourcers, CSC has seen engagements shift from supporting growth to "How can you help us become more efficient and save cash?" says Russ Owen, president of CSC's Americas commercial group.

The risk-reward provisions often involve CSC getting a share of savings achieved on behalf of clients, such as helping insurers identify fraud or multiple billings for the same services. When CSC helps its outsourcing customers launch products, such as a new health insurance policy, it's often paid based on the volume of claims activity. CSC expects volume-based, variable payments, which usually involve business process as well as technology services, to be a growth business.

Capgemini's risk-reward arrangements tend to have a business process outsourcing component as well. In one example, Capgemini has been working with an energy company that had been losing customers. It took over billing and customer service operations, and used analytics to spot the types of calls—like asking about rates—that are a red flag for customers who are at risk of leaving, then created offers to retain them. Capgemini earned a bonus based on the company's customer numbers.

For a consumer-goods company, Capgemini is running a billing and financials system where incentives are tied to spotting double-billing and other problems. Capgemini has hired people with coding and audit experience to try to outperform the customer's accounting system, and Capgemini gets a cut of any recoveries that result. But it's a bonus, says David Poole, head of Americas business process outsourcing for Capgemini, not the main means of payment.

Increasing revenue has been the goal of outsourcing efforts for a notable minority of companies—or at least it was before the worst of the downturn. In a survey by *InformationWeek Analytics* last spring of 272 companies, almost 30% cited increased revenue as a driver for BPO. In addition, 38% cited improved customer satisfaction and 42% faster time to market as BPO drivers. Not surprisingly, cost cutting was cited by 83% of companies.

Even when the economy picks up, revenue- and profit-sharing deals will continue to be more the exception than the rule, predicts Dave Liederbach, general manager of global strategies outsourcing with IBM. The reason is that it's too hard for most companies to tie a service to driving revenue growth, and most outsourcers don't have the industry experience needed to set up such deals. "You have to have the capacity to track revenue and influence outcomes," Liederbach says. "If all you deliver is low-cost labor and insight into how your products work, ... you'll run into trouble in aspiring to higher-value outcomes."

GET A COPY For a link to this article, send a text message to 88411 that reads: mar2303YourE-mail@YourDomain.com. SMS rates apply.

When IBM does tie contracts to outcomes such as revenue growth, Liederbach says, it's "not about extremes." Typically, only a fraction of the contract is variable. Also, in some industries, such as health care and government, revenue might be a less important measure than satisfaction or responsiveness. "Outcomes are based on client vernacular," he says.

In working with Norwegian Cruise Line, an incentive for IBM is that it can leverage the reservation-as-a-service model with other customers in the travel industry, applying what it learns working with the cruise line. CIO Cirel says the model will help the industry overall without hurting Norwegian Cruise Line, since it's not the transaction that's the competitive differentiator, but the "shopping process prior to making a reservation" where IT can provide a company with competitive advantage.

Liederbach points to Norwegian Cruise Line's move to reservations as a service as an example of companies cutting costs while using that as a reason

Continues on p. 36

What are some key financial drivers of BPO?

83% Cut costs

28% Increase revenue

Data: *InformationWeek Analytics* survey of 272 business technology pros

Agents of Change

How Wipro is helping companies thrive in tough economic times

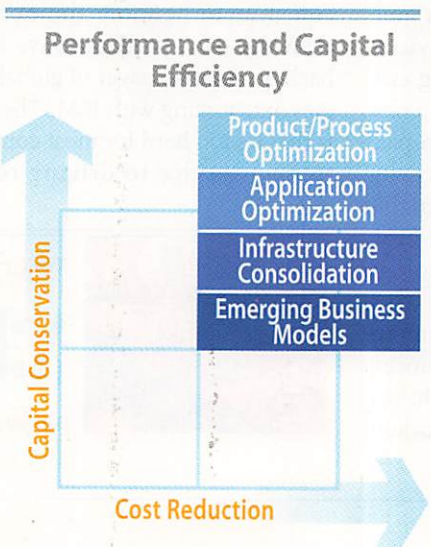
[Sponsored by WIPRO Applying Thought]

It's a simple fact of business today: information technology is the lifeblood of corporate enterprises, and companies cannot function without it. Yet in these recessionary times as revenue and profit decline, CEOs and CFOs are slashing corporate budgets, including those of their IT operations, challenging CIOs to provide the same or even new services with fewer dollars. Plus, any IT investments must have a quick return on investment, often in a year or less.

To meet that challenge, Wipro offers a new suite of transformational services it calls PACE—Performance and Capital Efficiency—to help CIOs move beyond basic survival and sustainability by lowering costs, improving service levels and operational efficiencies, and getting their companies to thrive even in today's challenging economy.

Simply, PACE aims to reduce clients' operating expenses and conserve capital expenditures by more effectively using IT investments, with a more rapid return on their investments. Through PACE, Wipro delivers four offerings:

- **Product/Process Optimization:** These services help companies significantly streamline business processes in areas such as order-to-cash and procure-to-pay. It also enables product optimization through Wipro's turnkey Product Engineering Services that reduce product development costs and time-to-market, as well as mitigate product risk through a risk-reward pricing model.
- **Application Optimization:** This service offers application consolidation and around-the-clock remote next generation, proactive application and infrastructure management. A service offering known as Flex Delivery which uses shared resources to lower application development and maintenance (ADM) costs, and a shared administrative service that supports global applications with attractively priced, cost-saving service-and business-level agreements.
- **Infrastructure Consolidation:** This offering provides a range of services, including data center management, server and storage consolidation, server virtualization and 24x7 remote monitoring and administration of IT infrastructure and networks through a state-of-the-art Global Command Center.
- **Emerging Business Models:** Wipro furnishes software-as-a-service (SaaS) offerings that help clients significantly reduce expenses and eliminate the need for capital expenditure. Among Wipro's cloud-computing offerings: hosted intelligent document management, hosted electronic data interchange (EDI), and a retail e-commerce solution.



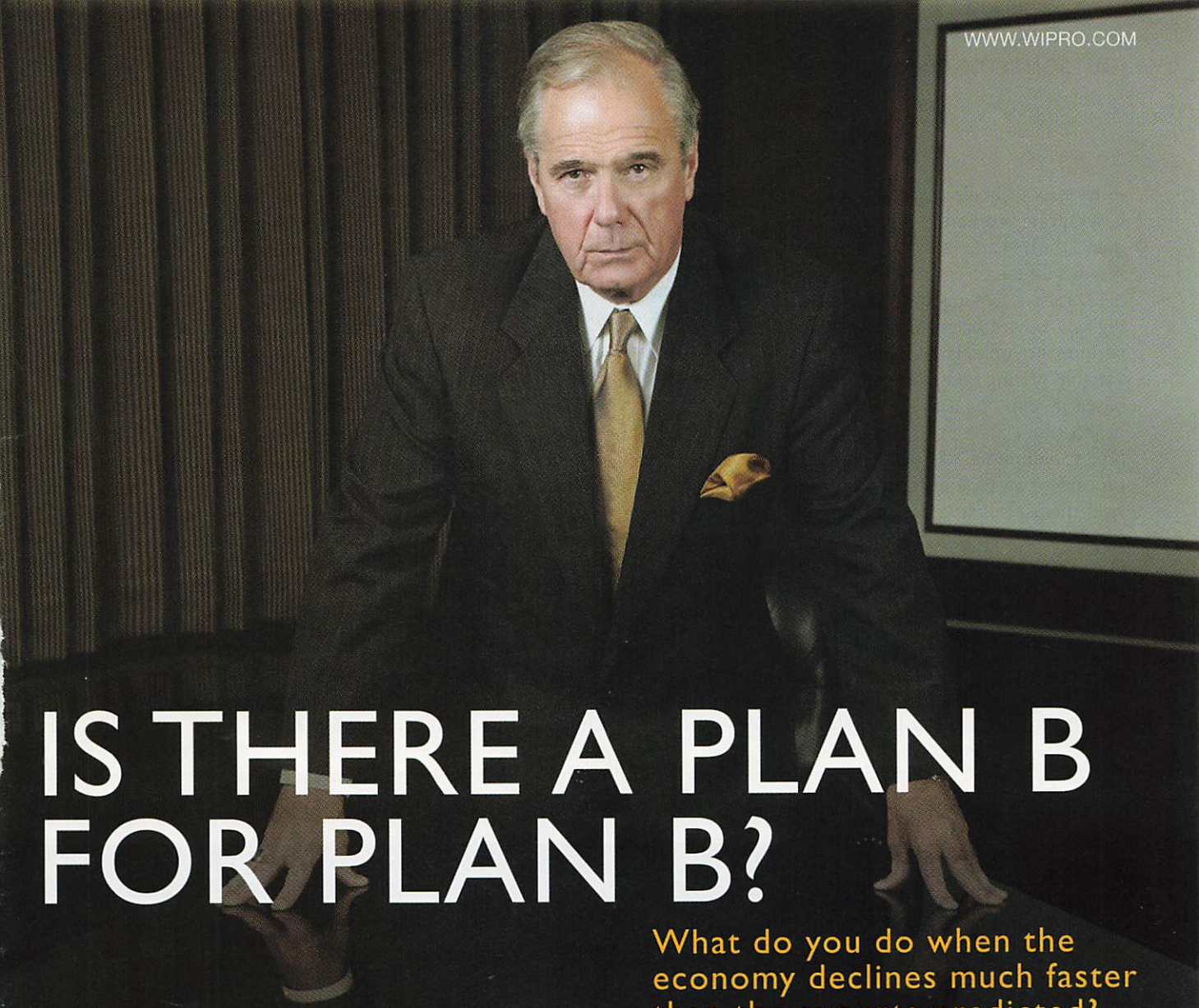
How successful is PACE? A major North American manufacturer of cleaning and hygiene products employed PACE to tackle an all too common and costly problem: maintaining multiple and incompatible systems that do the same things. For instance, the company deployed different enterprise resource planning systems in North America and Europe and 10 different applications to process sales invoices in just one European country. As part of the Application Optimization process, Wipro identified and decommissioned unused and unneeded applications. Wipro also advised the manufacturer to outsource management of the remaining IT infrastructure and processes. As a result, IT expenditures as a percentage of total revenue plunged to 2.5% from 4.5%.

Maintaining shareholder value in a recession is a challenge most publicly traded companies confront, including a $16 billion global maker of sportswear and sports equipment. To help achieve that goal, the manufacturer employed Wipro's Flex Delivery and 24x7 remote support services. The results were impressive: response times to change SAP applications declined by 20% to 30%, IT productivity improved by 5% to 10%, and project management costs fell.

A global electronics products distributor struggled with maintaining multiple computer platforms and data centers spread across three continents, seeing its operating expenses soar. Wipro's solution: virtualization, which reduced its storage footprint by 70%, number of servers by 50%, power costs by 40%, and personnel by 35%.

These are metrics corporate chieftains appreciate during a recession.

http://www.wipro.com/pace



IS THERE A PLAN B FOR PLAN B?

What do you do when the economy declines much faster than the experts predicted?

Wipro's Performance And Capital Efficiency solutions (PACE) help you go beyond survival and sustainability. Now you can transform your business, outperform the competition and thrive despite the uncertain economic climate. To find out how PACE can reduce costs, limit capex and increase performance—starting today, visit **www.wipro.com/pace** or email **info@wipro.com**

WIPRO
Applying Thought

SURVIVE AND THRIVE IN 2009 WITH PACE

• **Process/Product Optimization** • **Application Optimization** • **Infrastructure Consolidation** • **New Business Models**

NYSE:WIT. OVER 97,000 EMPLOYEES. 54 COUNTRIES. | IT SERVICES. R&D SERVICES. INFRASTRUCTURE MANAGEMENT. CONSULTING. BPO.

to try new technology models. "While cost cutting is a part of what we're all doing, the best are cost cutting to be positioned for long-term growth," he says.

EDS also is looking to cloud computing as a way to open up new pay-for-performance options. Today, most of its variable pricing contracts are output-based models, such as the volume of health care claims managed or e-mail boxes maintained. As more business processes can be moved online, they lend themselves to a variable model, says EDS VP Dan Zadorozny. However, don't expect big moves until the economy improves and business picks up. "We have some clients who are very interested in this when the time is right," Zadorozny says.

Even with a better economy, any deal linked to revenue or profit should be treated with a rigor that's close to what a company would apply to a joint venture, from the financial accounting to how each puts in investment funds, says Kate Hanaghan, senior analyst at research firm Bathwick Group.

Hanaghan estimates that fewer than 15% of outsourcing contracts today involve risk/reward provisions beyond conventional SLAs in which IT services providers are paid based on straightforward criteria such as systems availability or cost-cutting measures.

The more elaborate deals take more outsourcing management expertise than most companies have or are willing to develop. "Unless it's a mature buyer that knows the partner well, those kinds of deals are considered too risky, especially these days," Hanaghan says. "They require an enormous level of trust."

Plus, as companies look down the road to what they hope is an upturn, they're loath to share in potential growth. "Most clients want to control their own destiny, rather than share it," says TCS's Khan.

With a carefully crafted outsourcing deal, however, your company just might be able to accomplish both.

Write to Marianne Kolbasuk McGee at mmcgee@techweb.com.

DIG DEEPER

Models And Metrics Our report on the trends driving IT governance best practices is at *governance.informationweek.com*

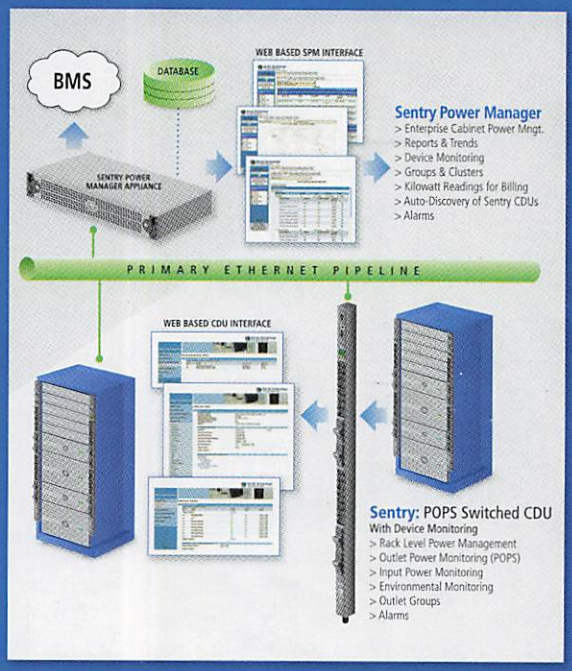
See all InformationWeek Analytics Reports at informationweekanalytics.com

How Do You Measure the Energy Efficiency of Your Data Center?

With Sentry Power Manager™ (SPM) and Sentry POPS™ (Per Outlet Power Sensing) CDU's!

> **Sentry POPS™**
Measure and monitor power information per outlet, device, application, or cabinet using Web based CDU Interface

> **Sentry Power Manager**
Secure software solution which allows:
> Monitor, manage & control multiple CDU's
> Alarm management, reports & trending of power info
> ODBC Compliant Database for integration into your Building Management or other systems
> kW & kW-h IT power billing and monitoring information per outlet, device, application, cabinet or DC location



Server Technology
Solutions for the Data Center Equipment Cabinet

Server Technology, Inc. / Headquarters
1040 Sandhill Drive
Reno, NV 89521–USA
www.servertech.com
www.servertechblog.com
tf +1.800.835.1515
tel +1.775.284.2000
fax +1.775.284.2065
sales@servertech.com

InformationWeek :: analytics

Of Execs, Action, And Data

Apps are important, but what IT really needs is more business direction

To develop our 2009 *InformationWeek Analytics*/Intelligent Enterprise.com Reader Priorities report, we asked 305 business technology professionals to select their biggest obstacles to business success from among a dozen IT maladies known to plague enterprises. The top three challenges? Adapting business processes for changing conditions; accessing relevant, timely, or reliable data; and integrating, normalizing, or cleansing data. Developing vital reports, metrics, dashboards, or alerts came in close behind.

HOW WOULD YOU DESCRIBE YOUR ORGANIZATION'S SUPPORT FOR BUSINESS INTELLIGENCE INVESTMENTS AND INITIATIVES?

Both management and end users think BI is a major asset and are generally supportive of new BI investments and initiatives	38%
Management thinks BI is an asset, but we have difficulty getting end users to utilize the reports, dashboards, and other tools we develop	27%
My end users are hungry for reports and insight, but upper management has held back support or funding for new BI investments and initiatives	27%
Neither management nor end users think BI is a major asset, so they aren't supportive of BI investments or initiatives	8%

Data: *InformationWeek Analytics*/IntelligentEnterprise.com Applications Survey of 242 business technology professionals with responsibility for BI

These results tell us that, despite all the progress and sophistication of enterprise IT, many companies still struggle with the basics of information management. After all, you won't be worrying about reducing data latency and supporting faster decision-making if you're still stuck at the first-level challenge of accessing and integrating data. And customizing or optimizing business processes and applications is unlikely to be a concern for those who can't get past an inflexible corporate culture and slow-moving IT development regimes that aren't keeping pace with fast-changing business conditions.

But what really surprised us is that, when asked what would improve their productivity, respondents ranked "better guidance from business leaders" first, and "additional financial support or additional staff" dead last among 10 possible responses. That's good news in that the "IT investment" these respondents are asking for is as much about time, organization, and leadership commitments as it is about hard-cash outlays. Now, top executives will likely have their hands pretty full over the next few quarters, so it might be tougher than ever to get their attention. And we're guessing it would *not* be a good career move to waltz into the executive suite and declare, "You really need to be doing a better job communicating strategy, and while you're at it, how about more support for our IT initiatives?"

Of course, the usual advice to "gain high-level sponsorship" certainly applies, but we'd hit the ball right back into IT's court and challenge CIOs and tech pros to engage line-of-business leaders. Particularly in these times, it's incumbent on everyone to understand the organization's mission and proactively seek direction from business leaders, rather than waiting for orders from above.

On the business intelligence front, lots of organizations are high on BI, with 38% of those responsible for BI initiatives saying that support is unanimous from the corner office to the cubicle. Still, for 27% of respondents, funding is a sticking point. End users are eager to see more reports and gain better insight, but upper management has held back support or funding for new BI investments and initiatives. The opposite problem is seen by the 27% who agree that management sees BI as an asset, but have difficulty getting end users to utilize the reports, dashboards, and other tools they develop.

Bridge The Great Divide

Whether you're facing a bottom-up or top-down disconnect, no amount of technology investment will bridge this divide. If you can't sell BI to C-level executives, it's likely you're either not telling the story effectively, or you're not delivering results that are making a big difference to the business. If end users aren't buying into BI, it could be a matter of inadequate training or

Get the full-length Analytics Report at: *business-optimization.techweb.com*

overly complicated technology—but first consider whether the BI team is truly tuned into end user needs.

An increasingly popular institution that can help bridge the management-to-user divide is the BI competency center (BICC), or BI center of excellence. The goal in setting up a BICC is to share proven practices and lessons learned across the organization. Ideally, BICCs are cross-disciplinary teams including both IT and business leaders, and they're most effective when sponsored by the COO, CFO, or other senior leader. CIOs can lead these groups, too, but be careful not to send the message that the BICC is primarily about technology.

C-level support will obviously help when it comes to management buy-in, but the BICC's role also is to set high-level goals and choose achievable projects that will really pay off for the business. Most importantly, BICCs bring together business leaders, architects, developers, and IT types to get buy-in on what's possible and achievable, and they monitor and fine-tune the results. If the reports or dashboards emerging from a project aren't useful or understandable to end users, for example, the BICC team should do whatever it takes to fix the problem.

In some cases, BI technology itself can be the root cause of a usability problem, so BICCs must have the clout to make tough decisions. For example, the greater good may be served by moving away from limited or antiquated tools preferred by one department in favor of a new enterprise-wide standard. "A lack of tool standards limits collaboration and portability of applications, and it also increases training and software licensing costs," says Claudia Imhoff, founder and president of BI consultancy Intelligent Solutions. "If you have the responsibility but not the authority to change anything, your BICC will be rudderless."

Here again the situation calls for support from on high, so don't waste people's time on a BI competency center if you can't secure senior-level support. It's notable that respondents ranked BICCs toward the bottom of possible productivity boosters, but we think BI practitioners tend to overestimate the burdens of holding meetings and working in concert with others while underestimating the importance of methodical BICC collaboration and review processes.

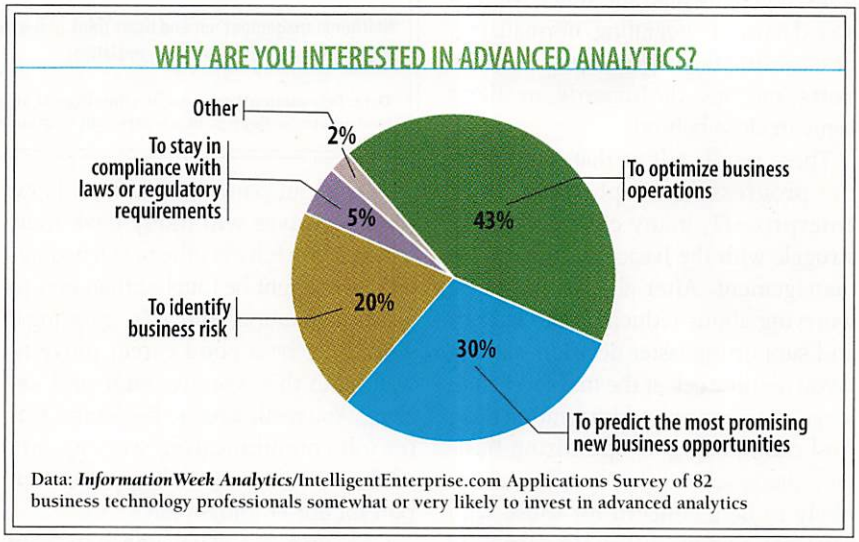
Spread Wealth, Predict The Future

Drilling down on where BI technology buyers are likely to invest, dashboards, ad hoc reporting, and advanced analytics top the list. The common theme in the first two selections is a desire to spread access to insight. Dashboards are rapidly displacing conventional reports as the front-line means by which day-to-day decision makers gain access to BI. These easy-to-use interfaces pack a variety of key metrics onto a single screen so users can monitor business conditions at a glance.

What's more, dashboards usually can be customized by end users, so they offer a way to share insight without the cost, complication, or IT hand-holding required by more conventional query and reporting tools.

Ad hoc query and reporting tools are becoming an option for self-service access to information. If a production report provides baseline insight into, say, top customers by region, product, and quarter, a modern ad hoc tool lets users drill down to find out which regions or salespeople had gains and which had losses. Just a few years ago, most ad hoc tools were geared to BI power users, but some tools are now easy enough for casual users to master.

Advanced analytics encompasses a variety of mathematical techniques that can be used to *calculate* attributes that can't be reported straight from the underlying data. Predictive analytics, for example, can crunch current and historical transaction figures to model a customer's likelihood to default on a loan or respond to an up-sell offer.



Data: *InformationWeek Analytics*/IntelligentEnterprise.com Applications Survey of 82 business technology professionals somewhat or very likely to invest in advanced analytics

Among the 82 respondents who are likely to invest in advanced analytics in the next two years, 43% say the main factor driving demand is the desire to optimize business operations, particularly factors such as pricing or profitability. Cross-selling, up-selling, and other customer marketing initiatives are driving 30% of respondents. Business risk applications such as churn analysis, fraud detection, and credit scoring are cited as the top draw by 20% of these respondents. *—Doug Henschen, IntelligentEnterprise.com (dhenschen@techweb.com)*

WEBCASTS

View them all at www.techweb.com/casts/

Upcoming Webcast

Best Practices for Database Security & Compliance

Join this live one-hour webcast featuring Forrester database security expert, Noel Yuhanna, to learn best practices for safeguarding enterprise data while addressing compliance requirements such as SOX, PCI and data privacy laws. You'll also benefit from Forrester's latest research on vendor evaluation criteria for enterprise database auditing and real-time protection.

Date: Tuesday, March 31, 2009
Time: 11:00 AM (PST)/
2:00 PM (EST)

Sponsored by: Guardium SAFEGUARDING DATABASES™

The Changing Role of the Security Leader An Executive Panel Discussion

Join this power panel of three security leaders to understand how their roles have evolved and what they believe is critical to sustain leadership and value within their organizations. In the face of unprecedented cybercrime threats, we'll explore their day-to-day priorities and how their initiatives and organizations have changed in the down economy and how they are measuring success in their programs.

Date: Tuesday, March 31, 2009
Time: 9:00am (PST) /
12:00pm (EST)

Sponsored by: FORTIFY

Maximize Your Virtualization ROI

IVirtualization delivers major benefits to your business that can help accelerate IT processes like never before and free you from the mundane manual management of systems. At the same time, getting this right requires the right processes and solutions to help avoid issues like virtual machine sprawl, siloed visibility, and management headaches that diminish ROI.

Effectively manage virtualization initiatives and control costs—take a dramatically better approach to IT management, focusing on solutions that let you manage across your virtual environment and its physical components.

In appreciation for your attendance on the day of our live webcast, you will receive the new EMA white paper "Automate Virtualization in Your Data Center," an analyst's perspective of an automated approach to virtual data center management.

All attendees will receive a personalized link following the event for download!**

Date: Tuesday, April 7 2009
Time: 8:00am (PST) /
11:00am (EST)

Sponsored by: hp invent

On - Demand Webcasts

Blueprinting the Mobile Internet

Don't miss this webcast featuring Yankee Group Senior Research Fellow Philip Marshall, who will discuss expanded revenue opportunities for mobile Internet services and what service providers need to do to transform their business.

Sponsored by: CISCO

True or False? Mac and Linux Computers Need Protection

Join this live one-hour webcast featuring security expert Jonathan Tait from Sophos to learn why non-Windows systems need protection.

Sponsored by: SOPHOS

Driving Business Results with a New Kind of Intelligence

In a turbulent economy, companies need to seize every viable opportunity possible. Yet, as the global markets struggle, any margin for error or inefficiency has virtually vanished. Access to sound intelligence – derived from accurate, up-to-date information– helps companies make game-changing decisions quickly and with confidence. But managing the deluge of information that floods modern businesses isn't easy.

Join TechWeb for this free Webcast featuring prominent industry analyst Dr. Fern Halper and IBM vice president of Information Management Product Strategy, Inhi Suh.

Sponsored by: IBM

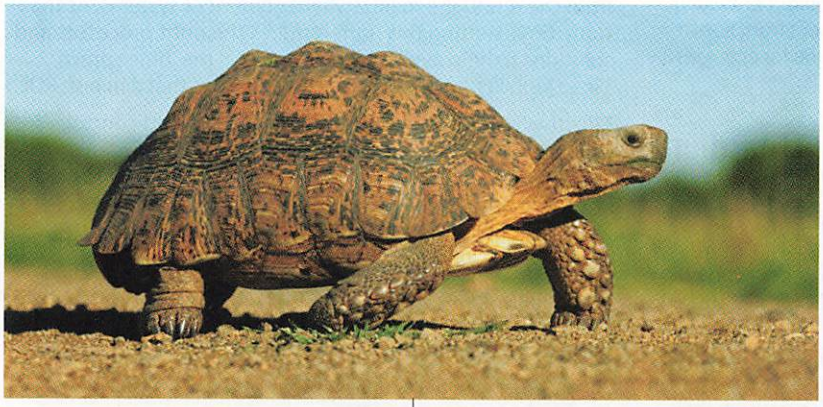
SMBs: Get More with Less from Your Power Protection

Join David Joy, vice president of marketing for the Liebert AC Power business of Emerson Network Power, to learn best practices for ensuring reliable, scalable power protection for IT equipment, as well as opportunities for reducing costs by preventing system downtime, enhancing energy efficiency and reducing total cost of ownership.

Sponsored by: Liebert.

Beat The Slow Commotion

Sluggish performance is a major headache for users of cloud-based apps



InformationWeek Analytics polled readers to get their take on the reliability of cloud-based services, from platforms to storage, virtualization, and applications. While just 27% now use cloud services or plan to within 12 months, an additional 25% are evaluating. Forty-eight percent say they have no plans. That seems high, until you consider that in our last major poll on the subject, in July, 65% didn't consider cloud computing a priority. Whether it's the economy, marketing, or the lure of the bandwagon, we're seeing increasing comfort with the cloud concept.

But IT pros are still keenly aware of the risks.

"The two biggest weaknesses of cloud computing are reliability and security," says one respondent. "Is the service going to be available 24/7? What happens when the Internet fails in a crisis? If there is a rush on the service, will the service collapse in a political or market crisis? Will our data and other information be compromised? How will we know if it has been compromised?"

No one has all the answers. One thing we do know is that the dearth of standard monitoring metrics, cloud vendors' reluctance to reveal performance statistics, and our own inability to guarantee connectivity quality on the Internet have combined to move performance from a small annoyance to certified nightmare status for organizations that have accelerated their adoption without proper planning.

You may be thinking, folks are reporting good success; if performance was bad, wouldn't we hear about it? Maybe not. Moving apps into the cloud is so darn easy, no one wants to face up to the dark side. There's certainly some Kool-Aid going around among our survey respondents: 33% say cloud-based applications have performed better than their in-house counterparts, and 54% say performance of their cloud-based applications has improved.

GET A COPY For a link to this article, send a text message to 88411 that reads: mar2304YourE-mail@YourDomain.com. SMS rates apply.

Fact check, please.

Forty percent of respondents using cloud computing don't monitor application performance. Just 16% use WAN acceleration, and a mere 20% have scoped out the potential impact of a cloud service on their Internet architectures. So how can they possibly quantify performance?

It pays to do your homework. As your organization takes a hard look at the cloud, study those who are doing it right. Respondents who've put monitoring tools in place and done assessments report the highest level of satisfaction with their cloud applications and had the best ratings of performance over the last year. They likely have realistic expectations and have put technologies and bandwidth in place to ensure service levels. Those who haven't done any of that? They had the lowest ratings. If you don't flesh out your data plan and establish a way to respond to issues, you're setting yourself up for a fall.

Fortunately, there are things you can do to minimize risk and gain the leverage you'll need to hold cloud vendors responsible when you do have problems—and trust us, you *will* have problems. The first thing to remember is that these services depend on the collaborative structure of the Internet. Every vendor, whether your established ISP or a cloud startup, has a disclaimer in its service-level agreement for items beyond its control. Want to get a cloud storage vendor to even guarantee basic connectivity to your data? Good luck, let us know how that goes.

Jupiterimages

Now, we're not saying the lack of an SLA means you're guaranteed subpar performance. But it does mean you need to have a plan to ensure that you're getting the most out of your investment. More and more software vendors are retooling their applications to provide better performance monitoring and control options; however, we have yet to see a tool that can give IT a true end-to-end picture of what's occurring. You'll still need to piece that together with available monitoring software, data from ISP and cloud partners, and some good old-fashioned customization based on your planned usage. Here's a five-step process.

1. Realize That Performance Begins At Home

"Without rock-solid service-level agreements that include substantial financial penalties for nonperformance, trusting our core applications to cloud providers just doesn't seem worth the risk," says one respondent. That's all well and good, but responsibility goes both ways. Look in the mirror and repeat after me: "We need to measure our internal traffic and bandwidth levels before even contemplating any—or any additional—cloud expansion."

A key requirement to getting this data is monitoring your existing traffic and connectivity. Surprisingly, however, many organizations have no overall monitoring in place for their internal operations. John Drew, director of managed services at GreenPages, says that less than 30% of the clients he works with have systems in place to monitor their internal networks.

"Most just tend to ignore internal performance until there's a problem, then do wholesale infrastructure upgrades when they start to have problems, which typically makes the issue go away, for a while," Drew says.

If you don't understand what's going on inside your network, you're going to be starting with incorrect data to judge your cloud. Baseline tracking is a must, regardless of your cloud plans. Take your pick of vendors—the field is large and includes CA, Hewlett-Packard, NetIQ, and NetQoS. This tracking will set the basic framework for monitoring and can expand beyond your location and into your applications themselves. Check out Michael Biddick's review of nine APM suites, at *informationweek.com/1172/apmreview.htm*.

DIG DEEPER

Plug Into The Cloud Learn how to maximize benefits and minimize risks. Download this at *informationweek.com/alert/cloud*

See all our InformationWeek Reports at informationweekreports.com

2. Work With Your ISP

We're frankly surprised that service providers get such a universally bad rap. It must be the fact that they're the first people we think of when there's an Internet issue—kind of like swearing at Bill Gates when Office crashes.

In reality, your connectivity provider can be invaluable in helping you understand, monitor, and troubleshoot cloud applications, yet surprisingly, many IT groups never even ask for assistance. That's too bad, because providers usually have a multitude of services that can help IT proactively monitor traffic. For example, a regional bank that was experiencing major performance problems with its cloud application enlisted its ISP out of desperation after weeks of slowdowns. The provider was able to leverage its monitoring tools to isolate the issue upstream at the cloud provider, not the client site or the ISP.

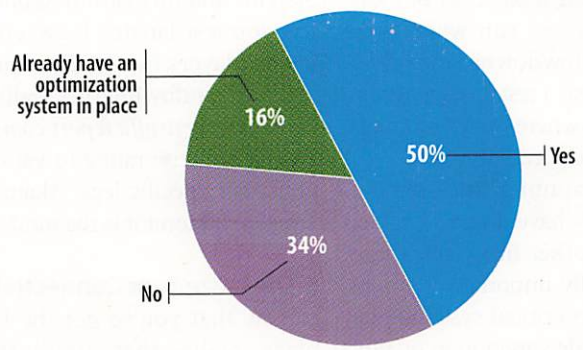
Remember, the ISP's primary job is to provide a pipe. It typically doesn't care what you use it for. SLAs are triggered by specific outages, not performance metrics for particular sites or apps.

If you're not sure where problems are originating, ask for data flow monitoring, including protocol analysis. The ISP likely already has the tools; it won't necessarily provide the service for free, but it will cost a fraction of purchasing the capabilities yourself.

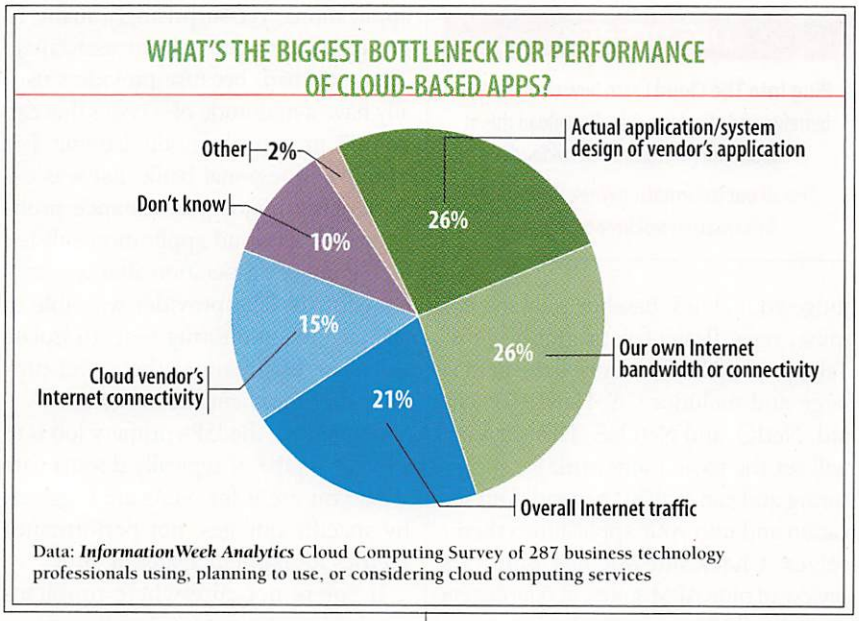
One other tip: Monitor your connections from a remote location. A simple traceroute should be able to outline the full connectivity path beyond your provider. Set up baseline router monitoring to watch your site, the provider,

ABOARD FOR WAN OPTIMIZATION

Would you be willing to invest in WAN optimization technology to improve performance between your sites and your cloud vendor?



Data: ***InformationWeek Analytics*** Cloud Computing Survey of 287 business technology professionals using, planning to use, or considering cloud computing services



Data: *InformationWeek Analytics* Cloud Computing Survey of 287 business technology professionals using, planning to use, or considering cloud computing services

and the next two hops. You can configure this mapping from both your main office and a remote site.

We're surprised how many cloud providers are caught telling fibs when they claim performance bottlenecks originate in customers' lines. It's important to document monitoring results so you can pin down the cloud provider or ISP when a slowdown is on its end.

3. Give Your Remote Workers Tools

Monitoring your provider from multiple sites is the best way to get accurate information on the cause of an outage. Take advantage of remote workers by issuing a basic set of tools and checks they can run when they need to report slowdowns. Include a baseline speed test, a test specific to the home office, and where feasible a snapshot test of the connectivity path.

This can be daunting since remote workers generally have a mix of cable, fiber, DSL, and other links, but these tools are especially important if you're adopting mission-critical systems like VoIP. There's a wide variation in quality for end users, and troubleshooting blind wastes valuable time. Case in point: One of our clients spent countless hours trying to resolve remote VoIP performance issues, only to discover the root cause for the most vocal user was the other activity on his home network. Seems the parent wasn't aware of the streaming server set up by the kids.

4. Be Aware Of The Overall State Of The Internet

Not the whole thing, just the core elements that matter to you. Understand traffic patterns, and stay abreast of major outages. Be aware of key connectivity points, especially as they relate to connections to your cloud partners.

There are multiple sources for this big picture; our favorites include Keynote Systems' Internet Health Report, which lets you test latency between various major players (*www.internetpulse.net*), and old standby Internet Traffic Report (*www.internettrafficreport.com*), which gives a numeric rating to various locations. For specific legs, Akamai's Real-Time Web Monitor is the most accurate.

5. Optimize Your Connectivity

Now that you've got the basics in place, realize that simply throwing bandwidth at the problem of sluggish cloud performance is a short-term fix that will catch up with you as usage grows. Not only does it weaken your original ROI arguments, it may also facilitate the proliferation of fat Internet applications like video streaming.

A better bet? WAN optimization. While just 16% of our respondents have optimization systems in place, we expect this sector to grow once IT groups realize the range of benefits. For example, appliances from vendors such as F5, Packeteer, and Radware enable packet shaping. Do you really want videos to have the same bandwidth priority as your core system apps? These appliances range in price from $15,000 to $80,000 per site depending on throughput, but in our experience typically provide ROI within a year vs. adding capacity.

Wide area file services and site-to-site compression options from vendors like Cisco and Riverbed are trickier to implement. We spoke with Steve Hernandez, CIO of America Service Group, which provides health information systems for institutions throughout the United States. Hernandez says several clients have used Riverbed units integrated with their main data centers. Many started with MPLS connections but were able to migrate to Internet-based connectivity, using the appliances to make up some of the performance gap. However, he cautions that getting compression boxes in client sites is a challenge because of the myriad DMZ and security hurdles, meaning it's an option only for larger accounts.

Smaller companies may consider leveraging their cloud vendors' preferred integration tools; many larger players offer multiple options, either appliances or other Web services, that clients can choose from. Appliance vendors like Cast Iron or services such as Boomi not only ease integration, they also provide built-in statistics for performance and application integration. This can give you an inside look at your cloud vendors' performance.

Michael Healey (mhealey@nwc.com) is CTO at technology integrator GreenPages.

Two Virtualization Niche Players Strut Their Stuff

When server virtualization comes up in conversation, it's easy to focus on the "big three," VMware ESX, Microsoft Hyper-V, and Citrix Xen, because of their market share and pervasive marketing. There are other players entering the fray, however. For this segment of our Rolling Review, we brought a couple of less-well-known entities—Virtual Iron Extended Enterprise Edition 4.5 and Parallels Server for Mac 3.0—into our virtualization test lab.

These two smaller players show there's more than one way to run virtualization hosts: Virtual Iron ably jumps through some of the same hoops as XenServer and Hyper-V, and we believe it could challenge VMware ESX in larger enterprises, if the company wanted to. Although Parallels Server wasn't up to our full gamut of tests, being a slightly different beast, it does serve its niche well, running Windows, Linux, and Mac OS X Server instances on Apple hardware.

In terms of performance, every server virtualization product we've tested so far in this Rolling Review has done more than live up to the vendors' claims, showing rapid evolution as the market has heated up. Virtual Iron's and Parallels Server's application performance also pleasantly surprised us.

Like the Xen-based virtualization system from Citrix, Virtual Iron has revved up its performance over the last few years while dramatically easing installation and administration tasks. Parallels leverages its "fat OS" experience with Parallels Desktop to deliver solid performance from its hypervisor, despite the underlying requirement of a full-load Leopard 10.5 OS chewing up system resources and routing I/O.

Both platforms are aimed squarely at the small- to midsize-business sector. Virtual Iron devotes most of its marketing to this segment, although we could see Virtual Iron 4.3's Xen-based hypervisor, centralized management, and per-socket pricing model playing well in larger companies, too.

Parallels Server isn't as mature or feature-rich as Virtual Iron. Its limited storage options, simplified networking capabilities, and lack of migration tools mean Parallels Server likely will be crossed off most potential customers' short lists, unless they're Mac shops. VMware's Fusion is tinkering with Mac OS guest support, but Parallels Server currently is the only solution on the market that lets you virtualize Apple Server instances with Apple's blessing.

Rolling Review | SERVER VIRTUALIZATION MANAGEMENT

Business value
We're testing virtualization management platforms to see if they lower hardware costs and save time and headaches for IT departments.

Reviewed so far

> **Citrix Systems XenServer:** Solid performance, many features, and now free. However, it lacks VMware's base of third-party support.
informationweek.com/1214/xenserver.htm

> **Microsoft Hyper-V:** Free, easy segue to basic virtualization for Microsoft shows. Features cost extra.
informationweek.com/1217/hyperv.htm

> **Parallels Server for Mac:** Currently the only game in town for Mac server virtualization, but its features are limited.

> **Virtual Iron Extended Enterprise Edition:** An easy-to-administer product at a very aggressive price.

Still to come
VMware ESX

More about this Rolling Review
informationweek.com/1208/virtual.htm

Find Your VI-Center

We built our Virtual Iron environment in an SMB frame of mind, and encountered no snags. Installation is simple; no archive file or boot disks here—Virtual Iron relies on VI-Center, a Java-based central management and network distribution tool, to get things moving.

The console can be installed on any Windows Server (2003 is recommended) or Linux host. No fancy hardware is required, so this is a great use for a repurposed older server. We installed VI-Center GUI on Windows 2003 and 2008 servers. After turning off 2008's security nannies and downloading the latest Java runtimes, we were ready to virtualize in about 10 minutes.

The last time we ran VI-Center through the lab (in its version 3.1 days), Fibre Channel was the only way to build a storage area network. Support for iSCSI is a welcome addition in Virtual Iron 4.5.

On startup, all hosts show up in the VI-Center graphical user interface as available hardware resources. The VI-Center server makes short work of configuring networks, network interface cards, local and iSCSI disk groups, SANs, and virtual NICs. Windows admins who are virtual machinery rookies can walk step by step through Virtual Iron's sidebar tutorial, all the way through building and assigning VMs to hosts.

Console views worked just fine in tests, although Linux control wasn't as smooth as Windows guest windows in our tests. Guest performance was more

than satisfactory, however—we'll present performance results in our Rolling Review wrap-up later this spring.

Virtual Iron calls its live migration of VMs LiveMigrate. LiveMigrate touts hardware independence, but according to the manual, make sure you go Intel-to-Intel or AMD-to-AMD when migrating. VI-Center does a good job of vetting the target host to ensure that memory, processor, and access permissions to the resource pool are all in place before allowing a move. It therefore can save you from bad decisions by simply not permitting a forced move to a host running at full capacity.

Like VMware, Virtual Iron prices per socket, delivering more bang for the buck with quad-core over dual-core chipsets. Of course, $799 per socket is significantly less than VMware ESX pricing, especially since Virtual Iron is following Citrix's model of bundled management tools. In terms of list price, going with Virtual Iron instead of VMware yields savings of 50% or more.

Physical-to-virtual and virtual-to-virtual conversions happen thanks to partner PlateSpin. The included bundle grants six conversions per socket license, which should take care of most consolidation scenarios. Additional conversion licenses can be purchased from PlateSpin.

Parallels' Line

As of this writing, Parallels Server is the only game in town with production support for hosting Mac OS X 10.5 Server guests. However, VMware's Fusion, Sun's xVM, and other major market forces are pushing Parallels to stay on top of its game.

As an aside, we like Parallels Desktop 4.0 for Mac. The latest revision resolves a number of usability and performance issues. Unfortunately, the current version of Parallels Server, 3.0, shares a version number with the last generation of Desktop.

Parallels Server brings a world of flexibility to Apple's Xserve line. Mac developers and production shops are already utilizing Parallels for test and sandbox environments; the novelty of virtualizing OS X builds seems to supersede the limited feature set compared with other hypervisor platforms.

Mac-only IT shops will probably be pleased that the product allows them to consolidate multiple out-of-support Wintel and Mac G4/G5 servers onto one or two new Xserves.

Parallels performed well on Apple's top-of-the-line eight-core Harpertown Xserve with 32 GB of RAM, three 15,000-rpm SAS drives and a Fibre Channel connection to a legacy Apple Xserve RAID setup with 4 TB of usable storage. In addition, we tested an older dual-core, 8-GB Xserve. Intel VT-x is required; older 64-bit PowerPC Xserves can't run Parallels.

Parallels was a gracious host for Windows 2003 and 2008, Debian, and OS X Server guests with no issues. Guest performance was more than adequate on the Harpertown box, while our older Xserve faced resource constraints when asked to run three Windows 2003 instances. Apple doesn't provide iSCSI support in OS X, but a number of hardware and software vendors offer third-party products.

The strangest issue we encountered involved USB support for a Windows 2003 guest—a low-use server ripe for virtualization (in this case, a building management system) that required an old-school USB dongle to function. Parallels Server does not offer USB support or robust virtual LAN mapping for guests VMs.

DIG DEEPER

Is Now The Time? Is your organization at the point where it pays to virtualize? Find out at *informationweek.com/1186/virtualize.htm*

See all our InformationWeek Reports at informationweekreports.com

Our Take | PARALLELS SERVER FOR MAC 3.0 AND VIRTUAL IRON 4.5

> Small and midsize businesses looking for an easy, economical path to virtualization, or Mac shops hoping to dump Windows hardware, will find that Virtual Iron and Parallels Server, respectively, fit the bill nicely.

> Parallels Server enables Mac OS X server virtualization without breaking any of Apple's rules. It hasn't received the same attention to detail as Parallels Desktop, though, and it shows.

> Virtual Iron could go head-to-head with VMware in the data center, but it's building its base from below with an easy-to-administer product at a very aggressive price.

Multiple virtual Parallels Servers can be managed from the Parallels Management Console. Like other VM management GUIs, hosts and guests can be paused, suspended, stopped, and reconfigured. Individual VMs can be accessed via detachable consoles. A stopped VM can be cloned.

However, there's no snapshot functionality, and performance prioritization is limited to optimization for either host or VM; there's no weighting between guests. There's also no live migration capability: VMs must be shut down and manually moved to a new host.

Parallels Transporter, the bundled physical-to-virtual conversion tool, performed with no issues in our tests.

Parallels charges just under $1,250 per host server regardless of configuration. This price is ideally suited for maximizing an eight-way Xeon Xserve, although it's not necessarily cost-effective for squeezing extra oomph out of a 2006 dual-core Xserve.

Joe Hernick (jhernick@nwc.com) is an industry analyst and former Fortune 100 IT executive.

Business Contacts

[Indexes]

For Advertising and Sales Contacts

go to createyournextcustomer.com/contact-us or
call John Siefert (949) 223-3642

EDITORIAL INDEX

Adobe 16
Akamai 42
America Service Group 42
Apple 17, 43
Bill & Melinda Gates Foundation 16
BMC Software 19
Boomi 42
Brocade 20
CA 41
Capgemini 33
Cast Iron 42
Cisco 19, 20, 42
Citrix Systems 43
CompTIA 18
Computer Sciences Corp. 33
Computing Research Association 16
Dell 19, 23
Drupal 28
Duke Energy 18
EDS 36
EMC 19, 25
Facebook 23, 24, 25
F5 42
General Electric 16
GlaxoSmithKline 16
GreenPages 41
Hewlett-Packard 19, 20
IBM 15, 19, 20, 33
Intel 19
Jive Software 25
Jungle Disk 17
Juniper 20
Keynote Systems 42
Kraft 17
MediaWiki 28
Microsoft 16, 17, 19, 20, 24, 43
NetIQ 41
NetQoS 41
Ning 24
Norwegian Cruise Line 33
Oracle 17
Pacific Northwest National Laboratory 18
Packeteer 42
Parallels 43
Pfizer 25
Philips 16
PlateSpin 44
Rackspace 17
Radware 42
Research In Motion 17
Riverbed 42
Scuttle 25
Slicehost 17
Socialtext 24
Society of Information Management 16
Spigit 28
Stevens Institute of Technology 16
Sun Microsystems 15, 19, 20, 44
Sybase 17
Tata Consultancy Services 32
Telligent 28
TransUnion 24
Twitter 25, 29
Virtual Iron 43
VMware 19, 20, 43
Voxel 17
Workday 17

ADVERTISING INDEX

Autonomy www.autonomy.com 13
CDW Corp. www.cdw.com 14
IBM www.ibm.com 26, 27, 30, 31, C3
Microsoft www.microsoft.com C2, 1, 7
Novell www.novell.com C4
Oracle www.oracle.com 2
RSA Conference www.rsaconference.com 21
SAS Institute www.sas.com 5
Server Technology www.servertech.com 36
SunGard Availability Services* www.sungard.com 22
Wipro www.wipro.com 34, 35
Workday www.workday.com 11

*DENOTES REGIONAL/DEMOGRAPHIC

Senior VP and Publisher, InformationWeek Business Technology Network, John Siefert
(949) 223-3642, jsiefert@techweb.com

Publisher's Assistant, Esther Rodriguez
(949) 223-3656, erodrigu@techweb.com

VP of Marketing, Scott Vaughan
(949) 223-3662, svaughan@techweb.com

VP of Sales, Brandon Friesen
(415) 947-6213, bfriesen@techweb.com

VP of Integrated Media, Chris Harding
(831) 426-2344, charding@techweb.com

VP of Integrated Media, Martha Schwartz
(212) 600-3015, mschwartz@techweb.com

SALES CONTACTS—WEST

California, Arizona, Colorado, Montana, Nevada, New Mexico, Wyoming

Western Regional Director, Matt Stovall
(415) 947-6245, mstovall@techweb.com

District Sales Manager, Pat Chin
(415) 947-6183, pchin@techweb.com

Account Manager, Kevin Flint
(415) 947-6349, kflint@techweb.com

Account Executive, Jenny Casey
(415) 947-6105, jcasey@techweb.com

Senior Sales Assistant, Jennifer Burstedt
(415) 947-6104, jburstedt@techweb.com

Idaho, Oregon, Utah, Washington, Alaska, Hawaii, Western Canada

Strategic Account Director, Cyndy Sandor
(650) 492-1194, csandor@techweb.com

Account Executive, John Wilkinson
(415) 947-6248, jwilkinson@techweb.com

Account Executive, Krystle Liew
(415) 947-6121, kliew@techweb.com

Sales Assistant, Justin Kischinevzky
(415) 947-6214, jkischinevzky@techweb.com

SALES CONTACTS—EAST

New York, New Jersey, Northeast, Pennsylvania, Michigan, Texas, Southeast, Canada

Eastern Regional Director, Linda Hooper
(212) 600-3153, lhooper@techweb.com

Senior Online Manager, Amy Neidlinger
(212) 600-3163, aneidlinger@techweb.com

Account Manager, Cori Gordon
(516) 562-5181, cgordon@techweb.com

Account Manager, Trecia Humphrey
(516) 562-5685, thumphrey@techweb.com

Account Executive, Michael Greenhut
(516) 562-5044, mgreenhut@techweb.com

Sales Assistant, Fantasia Brown
(212) 600-3029, fbrown@techweb.com

Sales Assistant, Jordan Leitner
(212) 600-3157, jleitner@techweb.com

Midwest and Mid-Atlantic

District Manager, Jenny Hanna
(516) 562-5116, jhanna@techweb.com

District Manager, Mary Hyland
(516) 562-5120, mhyland@techweb.com

Account Executive, Jennifer Gambino
(516) 562-5651, jgambino@techweb.com

Sales Assistant, Alicia Greco
(516) 562-5987, agreco@techweb.com

SALES CONTACTS—EVENTS

Director, Event Operations, Jennifer Russo
(516) 562-5094, jrusso@techweb.com

Group Events Sales Director, Tara Bradeen
(212) 600-3387, tbradeen@techweb.com

MARKETING AND RESEARCH

Assoc. Publisher, Marketing, Winnie Ng-Schuchman
(516) 562-5982, wng@techweb.com

Director of Marketing, Sherbrooke Balser
(949) 223-3605, sbalser@techweb.com

Research Director, Amy Doherty
(508) 416-1168, adoherty@techweb.com

Director of Online Research, Donna Fabyonic
(516) 562-5016, dfabyonic@techweb.com

Senior Marketing Manager, Ellen Asuncion
(949) 223-3622, easuncion@techweb.com

Field Marketing/Sales Ops Manager, Monique Luttrell
(415) 947-6304, mluttrell@techweb.com

AUDIENCE DEVELOPMENT

Sr. Group Director, Scott Popowitz
(516) 562-7919, spopowitz@techweb.com

Director, Karen McAleer
(516) 562-7833, kmcaleer@techweb.com

Subscriptions (800) 453-7221

ADVERTISING AND PRODUCTION

Publishing Services Manager, Lynn Choisez
(516) 562-5581 Fax: (516) 562-7307

Publishing Manager, Ruth Duggan
(516) 562-5111

MAILING LISTS

MeritDirect LLC (914) 368-1083

REPRINTS AND RIGHTS

For article reprints, e-prints, and permissions, please contact: Wright's Reprints, 1-877-652-5295, ubmreprints@wrightsreprints.com

Back Issues, Chandra Wallis (800) 444-4881

BUSINESS OFFICE

General Manager, Marian Dujmovits

EDITORIAL OFFICE

(Fax) 516-562-5200

United Business Media LLC
600 Community Drive
Manhasset, N.Y. 11030 (516) 562-5000

Copyright 2009. All rights reserved.

TECHWEB

Tony L. Uphoff CEO

John Dennehy CFO

David Michael CIO

John Siefert Sr. VP and Publisher, InformationWeek Business Technology Network

Bob Evans Sr. VP and Global CIO Director

Ann Marie Miller Sr. VP, Corporate Sales, Global Accounts

Eric Faurot Sr. VP, TechWeb Events Network

Joseph Braue Sr. VP, Light Reading Communications Network

Scott Vaughan VP, Marketing Services

John Ecke VP, Financial Technology Network

Beth Rivera VP, Human Resources

Jill Thiry Publisher, Microsoft Technology Network

Fritz Nelson Executive Producer, TechWeb TV

Scott Popowitz Sr. Group Dir., Audience Development

UNITED BUSINESS MEDIA LLC

Pat Nohilly Sr. VP, Strategic Development and Business Admin.

Marie Myers Sr. VP, Manufacturing

United Business Media

INFORMATIONWEEK (ISSN 8750-6874) is published 36 times a year by United Business Media LLC, 600 Community Drive, Manhasset, NY 11030. INFORMATIONWEEK is free to qualified management and professional personnel involved in the management of information systems. One-year subscription rate for U.S. is $199.00; for Canada is $219.00. Registered for GST as United Business Media LLC. GST No. R13288078, Customer No. 2116057, Agreement No. 40011901. Return undeliverable Canadian addresses to Bleuchip International, P.O. Box 25542, London, ON, N6C 6B2. Overseas air mail rates are: Africa, Central/South America, Europe, and Mexico, $459.00 for one year. Asia, Australia, and the Pacific, $489.00 for one year. Mail subscriptions with check or money order in U.S. dollars payable to INFORMATIONWEEK. For subscription renewals or change of address, please include the mailing label and direct to Circulation Dept., INFORMATIONWEEK, P.O. Box 1093, Skokie, IL 60076-8093. Periodicals postage paid at Manhasset, NY, and additional mailing offices. POSTMASTER: Send address changes to INFORMATIONWEEK, United Business Media LLC, P.O. Box 1093, Skokie, IL 60076-8093. Address all inquiries, editorial copy, and advertising to INFORMATIONWEEK, 600 Community Drive, Manhasset, NY 11030. PRINTED IN THE USA

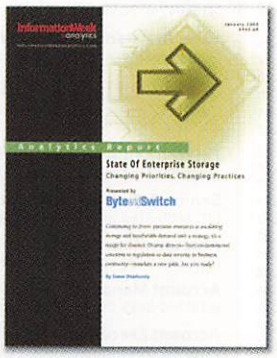
practical Analysis

ART WITTMANN

Cisco, IBM Make Plays For The Data Center

New networking and hardware architectures are important, but it's the applications that really count

If Cisco thinks it will call the shots in the data center over Hewlett-Packard and IBM, it has misjudged IBM. With its reported talks to buy Sun, IBM is essentially elevating the fight to a level it likes—namely, software and services, not plumbing. If it acquires Sun, it will be all about software architectures and open source and the future of application delivery. Sun's depressed stock price lets IBM wrest control of Java and MySQL while looking past a portfolio of hardware that it doesn't need and probably doesn't want. An IBM-Sun merger also would take a good deal of wind out of Cisco's sails.



It's not that Cisco's move into servers isn't an important one; it undoubtedly is. Its notion that servers should be less about a pile of sheet metal housing processors, memory, storage and expansion slots, and more about tightly packed processors and memory with a big fat pipe that readily connects to similar servers, is right on the money. Fully embracing virtualization and building servers that work best in a virtualized environment is a game where Cisco can compete. But it's just not as important as driving a software infrastructure that can support applications running securely and reliably anywhere and on any platform.

The transition to the data center that Cisco imagines will happen, but it's not a rip-and-replace imperative. As servers and networking gear reach amortization, smart data center architects will buy new stuff that will look more like what Cisco described last week, but whether they buy it from Cisco is another matter. IBM and other server vendors are used to dealing in the razor-thin margins that Cisco has never tolerated, and not even Cisco would create an environment that works well only with its own switches and servers.

The software transition on which IBM wants to capitalize already is well under way. If any organization once thought it could depend on a monolithic user application delivery environment (Windows everywhere), it's long moved on. Now it's all about Web services, and IBM wants the next generation of applications to be built on Linux and Java. On both the server and user device, Java is now more pervasive than Windows. In particular, Java sits at the heart of the BlackBerry, Symbian, and Android platforms, and IBM would like to see even greater adoption: netbooks for everyone, let 'em hook up to the in-house data center or apps in the cloud. That will be just fine with the new IBM.

This move also is a good sign for economy watchers. IBM reportedly is discussing paying a healthy premium for Sun, implying that it thinks Sun is worth far more than its market cap would suggest. As other tech companies with cash on hand start to feel comfortable that they know the scope of the recession, it's likely we'll see a lot more consolidation, a sign we've found a market bottom. If there's bad news for anyone in last week's moves, it's for Brocade and anyone else betting on the long-term viability of native Fibre Channel. Unless someone like EMC ponies up for Brocade, you can bet that native Fibre Channel will be just a memory in five years.

Art Wittmann is director of InformationWeek Analytics. Write to him at awittmann@techweb.com. See our data center storage report at stateofstorage.informationweek.com.

GET A COPY
For a link to this article, send a text message to 88411 that reads: mar2305YourE-mail @YourDomain.com. SMS rates apply.

What's going on with my partners in India?
How do I manage my supply chain across the globe?
Are we optimizing our customer-centric BI?

InformationWeek Global CIO

Plan, deploy and optimize global business technology strategies.

Find the top-level intelligence you need at InformationWeek's new site by and for CIOs. With access to exclusive insights and analysis, you'll learn how to transform your IT organization from an internally focused cost center to a world-class, customer-centric source of revenue, customer engagement and innovation.

InformationWeek Global CIO Resources:

- Blogs and articles from world-renowned leaders
- CIO Think Tank, a private community
- CIO TV and CIO Radio programming
- Virtual Events
- Webcasts
- Exclusive CIO research and Analytics reports

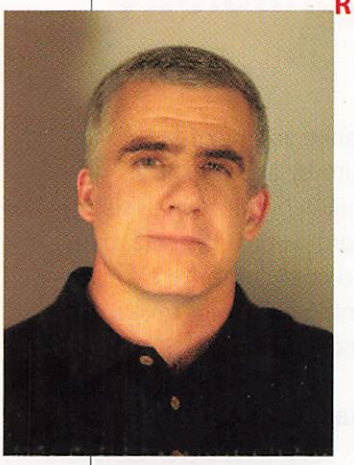
InformationWeek GLOBAL CIO

Get the big picture. Go to informationweek.com/global-cio

Answers. On demand.

InformationWeek BUSINESS TECHNOLOGY NETWORK

ROB PRESTON



Government Drags Health Care IT Into 21st Century

Given the lack of a dominant industry player to dictate supply chain standards (think Wal-Mart in retail), the feds need to get involved

The federal government has set aside close to $20 billion to "encourage" hospitals, doctors' offices, and other health care providers to start digitizing their medical records and processes. If that's not enough stimulus for providers to venture into the 21st century, watch as they go the way of the corner hardware store.

The federal stimulus package earmarks about $2 billion in loans and grants for hospitals and doctors to deploy e-health records, as well as for standards-related work. It also will pay providers more than $17 billion over the next five years for their "meaningful" adoption of e-health systems. The goal: to get at least half of U.S. hospitals and doctors' offices to adopt e-health record systems by 2014, up from less than 10% today.

As my colleague Marianne Kolbasuk McGee reported last week, it's up to the secretary of health and human services to spell out what "meaningful" means. The idea is for providers to use certified e-records products and e-prescriptions, and to be able to electronically exchange clinical and care data with one another and with government health agencies. The government is brandishing a small stick as well as carrots: Providers that don't adopt certain e-health systems will find their Medicare and Medicaid reimbursements reduced by 1% a year from 2015 to 2018.

The conventional wisdom is that hospitals and practices need government assistance because they don't have the funds to go digital. Even though electronic systems can reduce medical errors, paperwork, redundant procedures, and other inefficiencies, the reasoning goes, the financial rewards of automation accrue mostly to insurance companies, health plans, and government health programs, not to the outfits that dispense medical care.

Giving the laggards more ammo is an article in the March 12 issue of *The Wall Street Journal* by Jerome Groopman and Pamela Hartzband of Beth Israel Deaconess Medical Center. The two doctors question the $80 billion in savings President Obama has ascribed to e-health care records, as well as their effectiveness in reducing errors.

OK, the benefits are overstated by those parties with the most to gain: the government and system suppliers. And do I like that the government is creating yet another massive program to teach an industry how to behave? No. But given the lack of a dominant health care industry player to dictate supply chain standards (like Wal-Mart is in retail), the government needs to get involved.

As for the foot-dragging by health care providers, imagine if retailers and consumer-goods makers had resisted digitization years ago: "We'd love to automate our internal and supply chain processes, but our margins are pretty thin and we wouldn't realize the benefits as much as our partners would, so we'll take a pass" ... and fade into obscurity.

Not to say that digitization will come easy to health care providers, even with the government's support. E-health records systems are expensive and require changes in physician office workflow, crimping productivity as everyone gets up to speed. But which IT adopters don't face such hurdles?

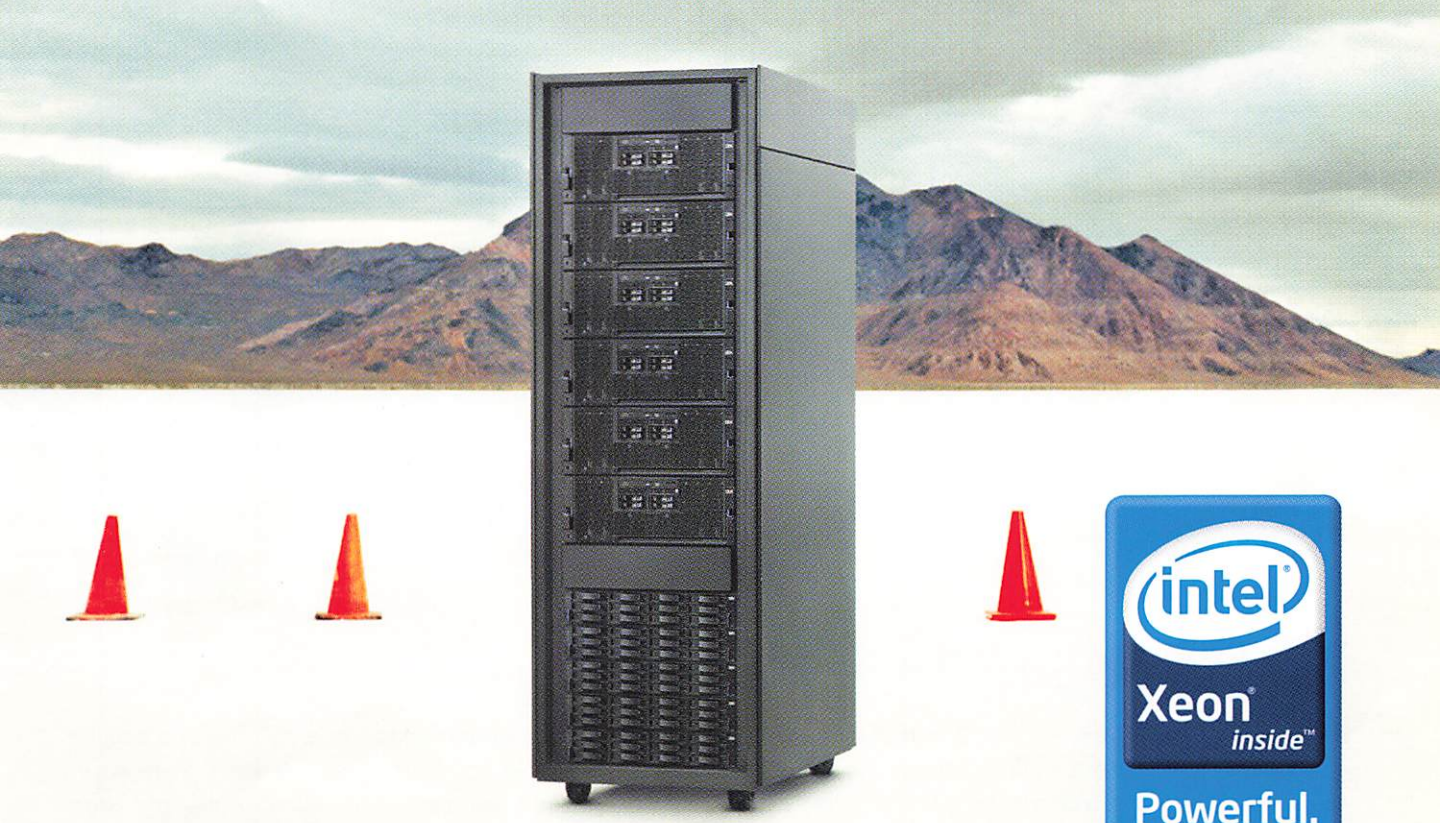
In the United States, 180,000 practices employ four or fewer doctors. But size is no longer an excuse for inaction. I recently switched from a 20-physician practice because it's still operating like it's 1990. Apparently the government, the country's largest health care payer, is fed up as well.

Rob Preston is VP and editor in chief of InformationWeek. Share your thoughts with Rob at rpreston@techweb.com.

IBM

1,200,000
TRANSACTIONS PER MINUTE.
DONE.

Introducing the world's fastest x86-64 server. The IBM System x3950 M2 with eX4 technology, Intel® Xeon® 7400 series processors and IBM DB2® has set a new performance record. IBM has built the first x86-64 system to break the one-million-transactions-per-minute barrier.[1] It's a new standard in performance that improves efficiency and can help save money in transaction and database processing. Find out how it can help you keep pace in a faster world at **ibm.com**/systems/fastest STOP TALKING **START DOING**™



intel Xeon® inside™
Powerful. Efficient.

[1]IBM System x3950 M2 with the Intel Xeon Processor X7460 (2.66GHz 8 processors/48 cores/48 threads), 1,200,632 tpmC, $1.99 USD / tpmC. availability as of December 10, 2008. Results referenced are current as of August 19, 2008. To view all TPC benchmark results, visit www.tpc.org. TPC, TPC-C and tpmC are trademarks of the Transaction Processing Performance Council. IBM, the IBM logo, System x, ibm.com, DB2 and STOP TALKING START DOING are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml. Intel, the Intel Logo, Xeon, and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the United States and other countries. © 2009 IBM Corporation. All rights reserved.

MANAGE WINDOWS SERVER WORKLOADS. MANAGE SUSE LINUX ENTERPRISE WORKLOADS.

WITH HALF THE WORK.

INTEROP ABILITY RUN WITH IT.

Bringing Windows Server® 2008 and SUSE® Linux Enterprise Server together into one reliable and secure virtualized environment — with clearly defined intellectual property rights — was just the start. Now we're developing solutions that will let you manage both operating systems using only one set of tools, and you choose the tools you prefer. Just what you need to combine your Windows and Linux data centers into one and cut complexity in half.

Need the best Linux? Request your SUSE Linux Enterprise deployment kit and workshop now at moreinterop.com

Novell® Microsoft®

Copyright © 2008 Novell, Inc. and Microsoft Corporation. All Rights Reserved. Novell, the Novell logo and SUSE are registered trademarks of Novell, Inc. in the United States and other countries. *Linux is a registered trademark of Linus Torvalds. Microsoft and Windows Server are trademarks of the Microsoft group of companies.